mecc

minnesota educational computing consortium

The
Electronic
Spreadsheet

Teacher's Manual
(Revised Edition)

For Use with the APPLE® II Computer

#964

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FOREWORD

With new applications being developed daily, VisiCalc is currently the most popular software in the world. For this reason, The Electronic Spreadsheet was developed. It was decided that the application exercises should be made appropriate to as many different business education classes as possible. This approach, it was thought, would greatly expand the library of business software which has instructional support available for the business education classroom.

A wide variety of application exercises are included and these range in difficulty so that they will be appropriate to all levels of students. Advanced students, for example, have the opportunity to "create" templates while beginning students can use a template which simply requires the input of data. To aid in the instructional process, this software package begins with a step-by-step tutorial on the use of VisiCalc.

Special recognition is due to the MECC staff and to the business instructors who have developed and tested the enclosed materials.

Truman Jackson
Secondary State Supervisor,
Business Education

INTRODUCTION

The Electronic Spreadsheet helps your business education students turn their Apple computer into a "what if" machine by teaching them to use the VisiCalc spreadsheet. Your students will learn how to do anything they would normally do on a traditional accountant's worksheet without the use of an eraser! A change in any part of the spreadsheet causes the automatic correction of all other cells on the spreadsheet which the change affects.

The Electronic Spreadsheet package provides a tutorial which teaches students the VisiCalc commands and gives them practice in using these commands. It also contains sets of problems for many specific business education curriculums such as consumer economics, record keeping, data entry, bookkeeping and accounting, office machines, office procedures and business management. A diskette containing templates for the tutorial and problem applications is also included. Information on obtaining VisiCalc at an educator's discount is included in the package.

You will need the VisiCalc commercial software package (which is copyrighted and marketed by VisiCorp, Inc.), an Apple II 48K (minimum) or Apple //e, disk drive, monitor, and printer (optional). This package provides a teacher's manual, student manual, and a diskette of templates.

VisiCalc ⓡ is a registered trademark of Personal Software, Inc., VisiCorp.

A Business Management Tool

Subject Area:	Business Education
Type:	Tutorial
Reading Level:	9 (Spache)
Grade Level:	9 - 12 and post-secondary

DESCRIPTION...

The Electronic Spreadsheet package introduces students to the concepts and skills necessary to use electronic spreadsheets. It consists of a self-guided set of eight lessons used in conjunction with the VisiCalc software. Following completion of the eight lessons, problem applications are provided for each of eight business education areas: data entry, beginning accounting, advanced accounting, business machines, office procedures, recordkeeping, consumer economics, and business management.

OBJECTIVES...

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1. to understand the computer's capability to store information, to do automatic calculations, to manipulate data, and to simplify business recordkeeping procedures

2. to develop skills in the use of an electronic spreadsheet

3. to develop skills in interpreting familiar business problems in reference to the electronic spreadsheet and designing electronic spreadsheet templates to solve those problems

4. to use prepared templates to solve problems familiar to small business settings

USE IN AN INSTRUCTIONAL SETTING

Preparation

Courseware Needs:

VisiCalc Program Diskette and User's Guide
MECC Electronic Spreadsheet Diskette
Student Data Diskette (Blank Diskette)
Student Manual

VisiCalc software is available from the manufacturer at a substantial discount for educators. Contact the Sales Education Manager at the following address for information on requirements for purchasing software at a discount:

Sales Education Manager
VisiCorp Personal Software
2895 Zanlan Road
San Jose, CA 95134
408/946-9000

Equipment Needs: Apple II or //e   (48K minimum)
                        Disk Drive
                        Monitor
                        Printer (optional)

. If available, a printer is very beneficial for printing out spreadsheets. In real-life business applications, a printer for hard-copy reports is almost a necessity. Since you are attempting to approximate the actual business uses of VisiCalc, a printer is recommended. Interfacing the printer with the Apple is covered in your printer reference manual. Templates the students are asked to print out will work on an 80-column printer. Several other templates on the MECC Electronic Spreadsheet Diskette require a 132-column printer.

Your students should know how to use the Apple II, and how to load and handle diskettes; they should also be familiar with the keyboard. The VisiCalc User's Guide covers these points in its Introduction. Your students should read the information on these pages if they are not familiar with use of the Apple or the care of diskettes.

The tutorial was prepared for use with the Apple II. If you are using the Apple //e, you will need to warn the students about the references in the tutorial to the REPT key, which the Apple II has, but which the //e does not. On the //e, the repeating function for any character is carried out by holding down the key for that character.

USE IN AN INSTRUCTIONAL SETTING (continued)

Handouts 1 and 2 should be provided to your students prior to beginning the Tutorial. Handout 1 - "A Powerful Business Tool" is a student reading which will give students an overview of what electrionic spreadsheets can do. It should be read before doing the Tutorial lessons. Handout 2 - "VisiCalc Commands" is a quick reference guide of the commands taught in the Tutorial. It can be folded and taped above the keyboard for reference during the Tutorial.

Use of the Manual and Templates Diskette

This manual contains a Tutorial and a set of Problem Applications. The Tutorial is also provided in a separate student manual. Students should be able to complete the Tutorial with very little assistance from the classroom instructor. Problem Applications should be assigned with the background and skills of the individual student in mind.

Templates from the MECC Electronic Spreadsheet Diskette are required for both the Tutorial and Problem Applications. Handouts used during the Tutorial must be duplicated and given to the students. Handouts used during the Tutorial are those numbered 3 through 6.

Once the Tutorial is completed, students will have practiced the beginning commands and operations of VisiCalc. They should at this point be able to complete the Problem Applications. Keys for selected problem applications are provided in this manual.

Problem Applications have been prepared which can be used in several different business education classes. These include data entry, beginning accounting, advanced accounting, business machines, office procedures, record keeping, consumer economics, and business management. The matrix on the following page correlates the applications with the appropriate business education areas.

Some Problem Applications can be done prior to completion of the entire tutorial. If this is desired, refer to the matrix which shows where the Problem Applications could be inserted in the Tutorial. The applications have been keyed to the Tutorial at those points where students have learned the skills necessary to use VisiCalc to solve the problem.

Printouts of the template as it appears on the screen can be made for templates your students create or for those templates contained on the MECC Electronic Spreadsheet diskette. Students are taught how to do this in Lesson 5 of the Tutorial. Instructions for printing templates can also be found in the VisiCalc Command Reference section of the VisiCalc User's Guide.

USE IN AN INSTRUCTIONAL SETTING (continued)

It is sometimes also helpful to generate a printout of the template formulas and formats. VisiCalc allows you to print out all formulas and cell contents as well as the format settings. To print out formulas and formats refer to the VisiCalc Command Reference Section of the VisiCalc User's Guide.

Follow-up

After completing the Tutorial and assigned Problem Applications, students should be able to design their own templates to solve additional problems. Business Education textbooks may be a source of problems which could be solved using VisiCalc. Another follow-up activity is to modify the MECC VisiCalc templates to fit variations on the Problem Applications which you or your students might create.

LESSON MATRIX

BUSINESS EDUCATION AREA EMPHASIZED

PROBLEM APPLICATION	Data Entry	Beginning Accounting	Advanced Accounting	Business Machines	Office Procedures	Record-keeping	Consumer Economics	Business Management	Problem could be inserted in tutorial after completion of:
Cash Proof	X					X			Lesson 1
Papa's Pizza Parlor (Inventory)	X			X	X	X			Lesson 5
Personal Budget						X	X		Lesson 4
Compound Interest Comparison				X			X		Lesson 3
Travel Expense Report	X				X	X			Lesson 3
Service Business Income Statement			X					X	Lesson 5
Merchandizing Business Income Statement			X			X		X	Lesson 5
Trial Balance		X				X			Lesson 2
Comparative Common Size Balance Sheet		X	X					X	Lesson 6
Comparative Income Statement		X	X					X	Lesson 6
Departmental Budget		X	X					X	Lesson 5
Balance Sheets		X				X			Lesson 3
Bank Reconciliation						X	X		Lesson 3
Big Spend Expense Report					X	X			Lesson 6
E-Z Payroll		X				X			Lesson 6

STUDENT HANDOUTS

AND

ANSWER KEYS
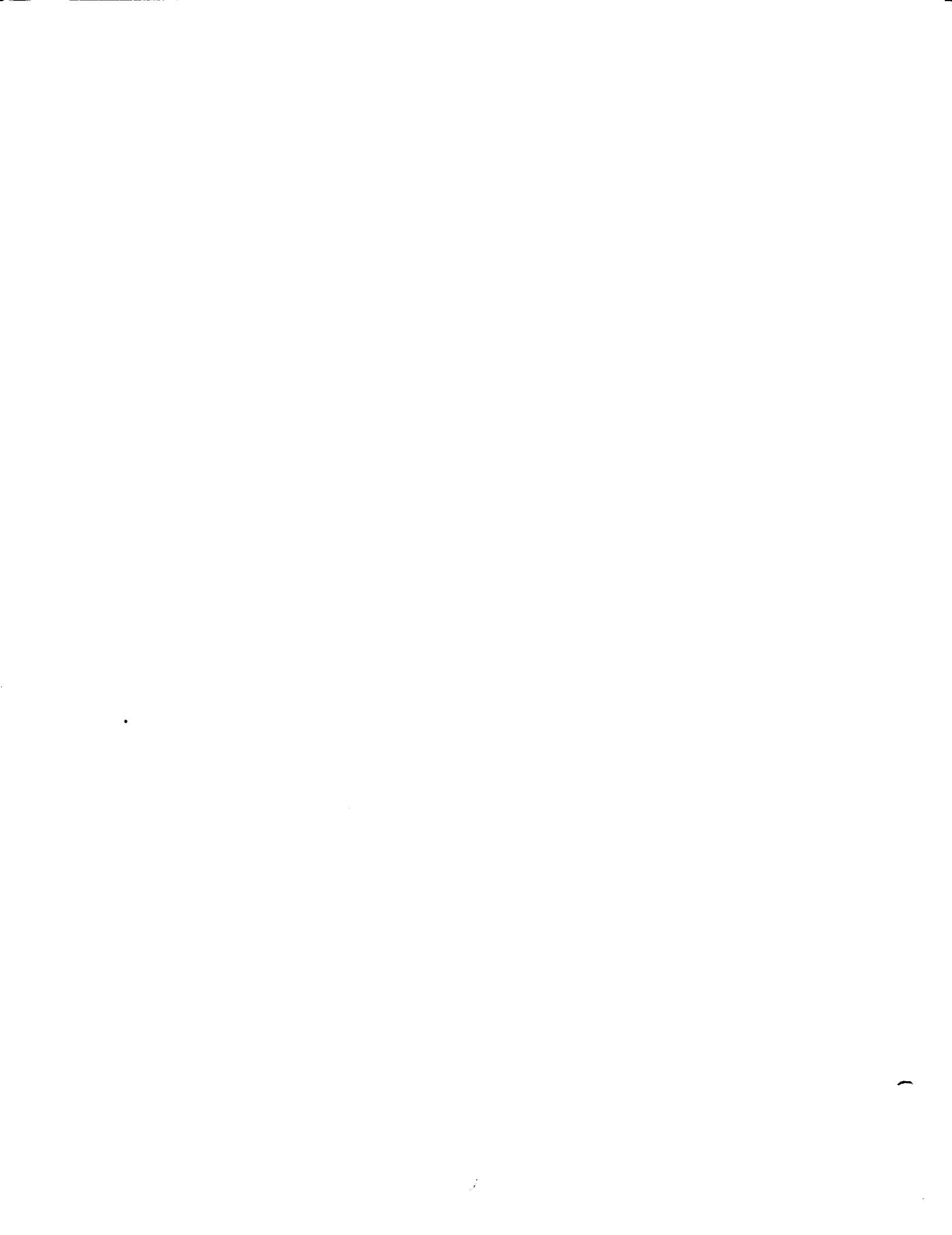
A POWERFUL BUSINESS TOOL

In most of your work in Business Education classes you have encountered problems which you probably answered with a calculator, a pencil, an eraser (very important!), and a piece of paper. Calculating sales projections, income taxes, financial ratios, budgets, cost estimates, account balancing, etc. can all be done with these tools.

Electronic spreadsheets replace these instruments by substituting a computer for the calculator, a keyboard for the pencil, automatic recalculation for the eraser, and turning a video screen window into a gigantic spreadsheet for the paper. This window can be moved around the spreadsheet in any direction.

You will discover the characteristics and capabilities of an electronic spreadsheet as you work through the lessons. The following information will provide you with a brief description of these characteristics before you begin to use the materials.

The electronic worksheet is too large for you to see the entire sheet on the video screen at one time. It is a grid having 16002 "cells." These cells are formed by the intersection of 63 columns and 254 rows. In each of these cells, you will be able to enter a title, a number, or a formula to be calculated. In this way you can set up your own charts, tables, and records.

Once you have set up your electronic spreadsheet with titles, numbers, and formulas, you can utilize the real power of an electronic spreadsheet. The computer uses formulas to calculate and recalculate data on your worksheet. If you change a number you had previously entered on the electronic worksheet, all other related numbers on the worksheet change before your eyes as the program automatically recalculates all relevant formulas. You can correct mistakes and omissions and examine various alternatives easily.

You will learn to use this powerful tool and prepare yourself for an application which is becoming very popular in the real-world business setting.

VisiCalc Commands

CURSOR MOVEMENT

>	Go to coordinate
←	Left in row/Up in column
→	Right in row/Down in column
SPACE BAR	Switch direction of cursor motion
REPT	Continues until repeat key released*

MISCELLANEOUS

ESC	Backup (erase)/Backout (cancel)
!	Complete calculations
/-	Dotted lines
"	Enter non-lettered labels; format cell
+	Indicates value, not label

*NOTE: The Apple II has the REPT key, but the //e does not. On the //e, the repeating function for any character is carried out simply by holding down the key for that character.

DATA COMMANDS

/	Displays the letters which stand for VisiCalc commands. Combine the command as shown below to perform VisiCalc functions
/SS	Store/Save
/SL	Load a file (Caution! To blank out a previously used file, type /C first. Otherwise your new file will be loaded on top of the old file.)
/SI	Initialize a data diskette
/C	Clear the sheet; sets all entries to blank
/B	Blank a cell
@ SUM (list)	Calculate sum of the values in list
@ AVERAGE (list)	Calculate average of the values in the list
/F$	Format for dollars; displays # to hundredths place
/FI	Format for integers; rounds to nearest whole number
/R	Replicate
CTRL-E	Edit what is displayed on "edit" line
/E	Edit the entry contents of any entry position by redisplaying it on the entry line
/TH	Set cursor movement limits to horizontal title area
/TV	Set cursor movement limits to vertical title area
/TB	Set cursor movement limits on both vertical and horizontal title area
/TN	Cancel cursor movement limits
/P	Print command
/G	Global commands which make changes to the entire sheet or window
/GF	Global default format
/GO	Set order of recalculation for columns or rows
/GR	Global Recalculation
/GRM	Manual command for recalculation
/GRA	Automatic recalculation

═══ FINDING YOUR WAY AROUND ═══

Name _____   Hour _____   Class _____

You will make use of the commands that you covered in Lesson 1 to complete this worksheet. Write what is located in the following CELLS in the space provided.

CELL A1   _____

CELL C1   _____

CELL A3   _____

CELL A12   _____

CELL D11   _____

CELL H9   _____

CELL G11   _____

Copy what is on the Entry
Line for G11 _____

CELL G12   _____

Copy what is on the Entry
Line for G12 _____

CELL C6   _____

CELL C12   _____

CELL E9   _____

CELL E11   _____

CELL X100   _____

CELL AH150   _____

CELL AD20   _____

CELL K123   _____

CELL A54   _____

CELL AC189   _____

CELL A50   _____

CELL AK65   _____

FINDING YOUR WAY AROUND

ANSWER KEY

Name _____   Hour _____   Class _____

You will make use of the commands that you covered in Lesson 1 to complete this worksheet. Write what is located in the following CELLS in the space provided.

CELL A1   FINDING Y _____

CELL C1   ROUND _____

CELL A3   TEMPLATE _____

CELL A12   JOHNSON _____

CELL D11   34 _____

CELL H9   (Cell H9 is empty) _____

CELL G11   125.29 _____

CELL G12   103.73 _____

CELL C6   10 _____

CELL C12   504566543 _____

CELL E9   OLD RATE _____

CELL E11   3.35 _____

CELL X100   HOORAY! _____

CELL AH150   YOU _____

CELL AD20   HAVE _____

CELL K123   COMPLETED _____

CELL A54   YOUR _____

CELL AC189   FIRST _____

CELL A50   VISICALC _____

CELL AK65   LESSON. _____

Copy what is on the Entry Line for G11   G11 /F$ (V)+D11*F11

Copy what is on the Entry Line for G12   G12 /F$ (V)+D12*F12

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FOOTBALL INCOME

1. Clear your screen.

2. Label a spreadsheet as shown below. You will only put the labels on this spreadsheet now. You will use this spreadsheet in Lesson 3.

3. When you have entered the labels, save this spreadsheet under the file name LESSON 2-2.VC by entering **/SS** and the file name **LESSON 2-2.VC.**

LABELS FOR COLUMNS:

LABELS FOR ROWS:

	A	B	C	D
1	ADULT PRICE			
2				
3	STUDENT PRICE			
4				
5	EXPECTED ADULTS			
6				
7	EXPECTED STUDENTS			
8				
9				
10	TICKET SALES INCOME			
11				
12				
13	FOOD STAND INCOME			
14				
15				
16				
17		TOTAL INCOME		

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THE RUNNER'S STORE

Use your template to answer the following questions.

What month was the highest in gross sales? _____ What was the
total? _____

Enter the total gross sales for each month

Month 1   _____
Month 2   _____
Month 3   _____
Month 4   _____
Month 5   _____
Month 6   _____

THE RUNNER'S STORE
ANSWER KEY

Use your template to answer the following questions.

What month was the highest in gross sales? <u>(Month 6)</u> What was the total?
<u>($4535.19)</u>

Enter the total gross sales for each month

Month 1	$3838.00
Month 2	$3944.32
Month 3	$4065.70
Month 4	$4203.53
Month 5	$4359.41
Month 6	$4535.19

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RECORD SALES

1. Move cursor to cell B18.
    Replace the @NA with the sum function for the total of column B7 through B15: @SUM(B7...B15)   Do not be concerned about the word ERROR which appears in many cells.

    Use the following total dollars of record sales for each: Enter these amounts in column B.

Classical	70.00	Jazz	800.95
Country	150.00	Popular	98.50
Rock	95.75		

    Notice that VisiCalc has calculated the % of sales (Column C), rounded this to 2 places (Column D), and rounded to whole numbers (Column E).

    a. Total Sales _____

    b. Which is the most accurate column?

    c. Which column would you use to estimate sales for the coming year? ___

        Why? _____

    d. Which column would you use to record your financial statement for this month? _____

        Why? _____

RECORD SALES
Page 2

2.   Save your Spreadsheet.

    a. <u>Press /SS</u>
    b. <u>Title: LESSON 7.VC</u>
       When VisiCalc says the file already exists, and asks if you want to
       replace it, <u>enter Y</u> for Yes.

3.   If you have a printer, print out your spreadsheet.   Refer to step 15
    (Lesson 7) to print out the spreadsheet.   Attach your print-out to this
    worksheet.

    If you don't have a printer attached to your microcomputer, you can
    fill out the chart below.

    List the contents of columns B through E.

	B	C	D	E
7				
9				
11				
13				
15				
18				

RECORD SALES
ANSWER KEY

1. Move cursor to cell B18.
    Replace the @NA with the sum function for the total of column B7 through B15: @SUM(B7...B15) Do not be concerned about the word ERROR which appears in many cells.

    Use the following total dollars of record sales for each: Enter these amounts in column B.

Classical	70.00	Jazz	800.95
Country	150.00	Popular	98.50
Rock	95.75		

    Notice that VisiCalc has calculated the % of sales (Column C), rounded this to 2 places (Column D), and rounded to whole numbers (Column E).

    a. Total Sales **1215.20**

    b. Which is the most accurate column? **C**

    c. Which column would you use to estimate sales for the coming year? **E**

    Why? _____

    d. Which column would you use to record your financial statement for this month? **D**

    Why? _____

2.   Save your Spreadsheet.

a. Press /SS
b. Title: LESSON 7.VC
    When VisiCalc says the file already exists, and asks if you want to replace it, enter **Y** for Yes.

3.   If you have a printer, print out your spreadsheet. Refer to step 15 (Lesson 7) to print out the spreadsheet. Attach your print-out to this worksheet.

If you don't have a printer attached to your microcomputer, you can fill out the chart below.

List the contents of columns B through E.

	B	C	D	E
7	70.00	5.760369	5.76	6
9	150.00	12.34365	12.34	12
11	95.75	7.879361	7.88	8
13	800.95	65.91096	65.91	66
15	98.50	8.105662	8.11	8
18	1215.20			

STUDENT TUTORIAL

LESSONS 1-8
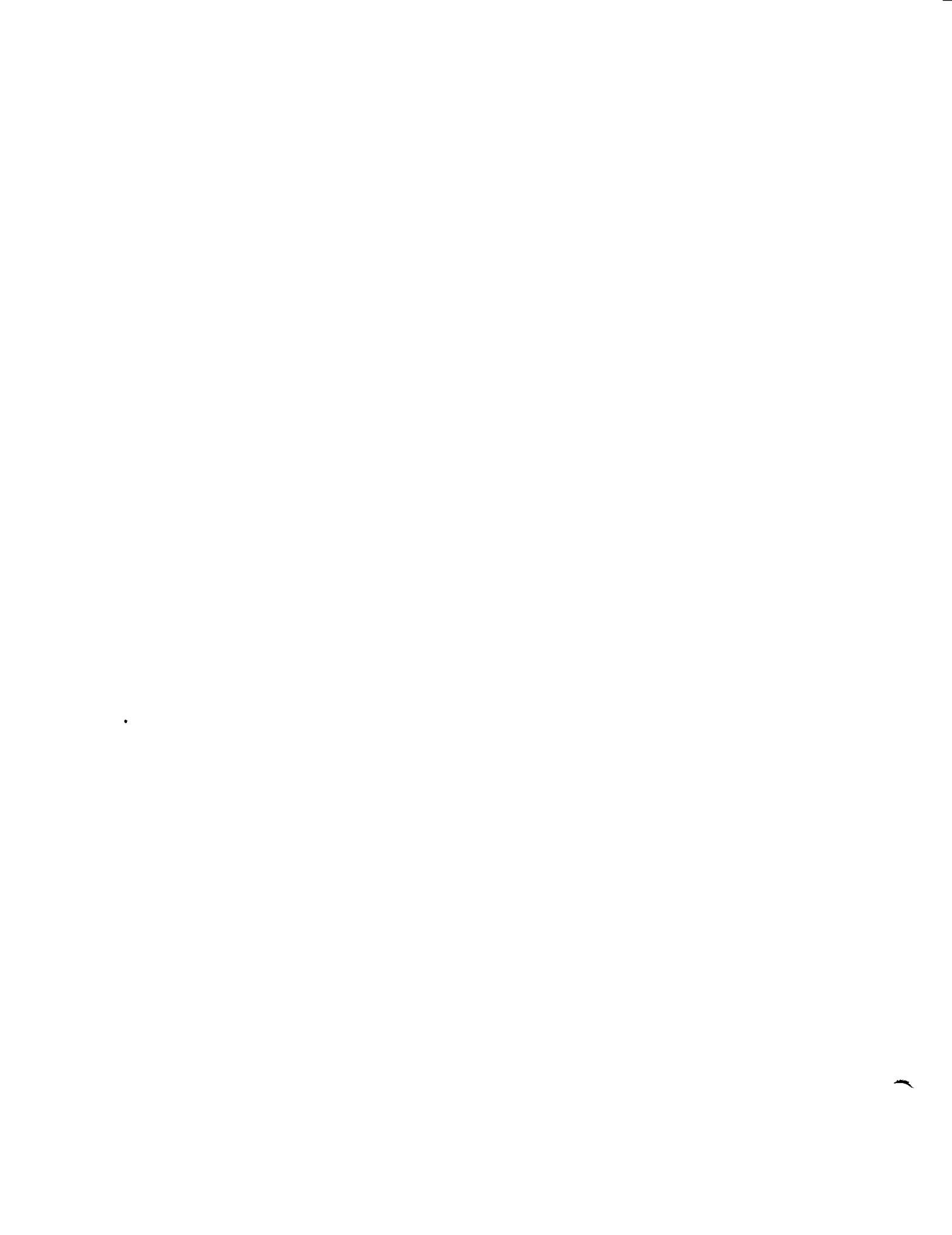
Student Note: Before starting this lesson you will need the following materials:

                    1)   VisiCalc Diskette
                    2)   MECC Template Diskette
                    3)   Handout 3 - "Finding Your Way Around"

BECOMING FAMILIAR

1.   <u>Load VisiCalc into your Apple computer.</u> When the red disk drive light goes off, remove the VisiCalc diskette from the disk drive, put it in the protective envelope, and return it to its storage place.

2.   The VisiCalc spreadsheet should appear on your screen. It should look like the screen below.
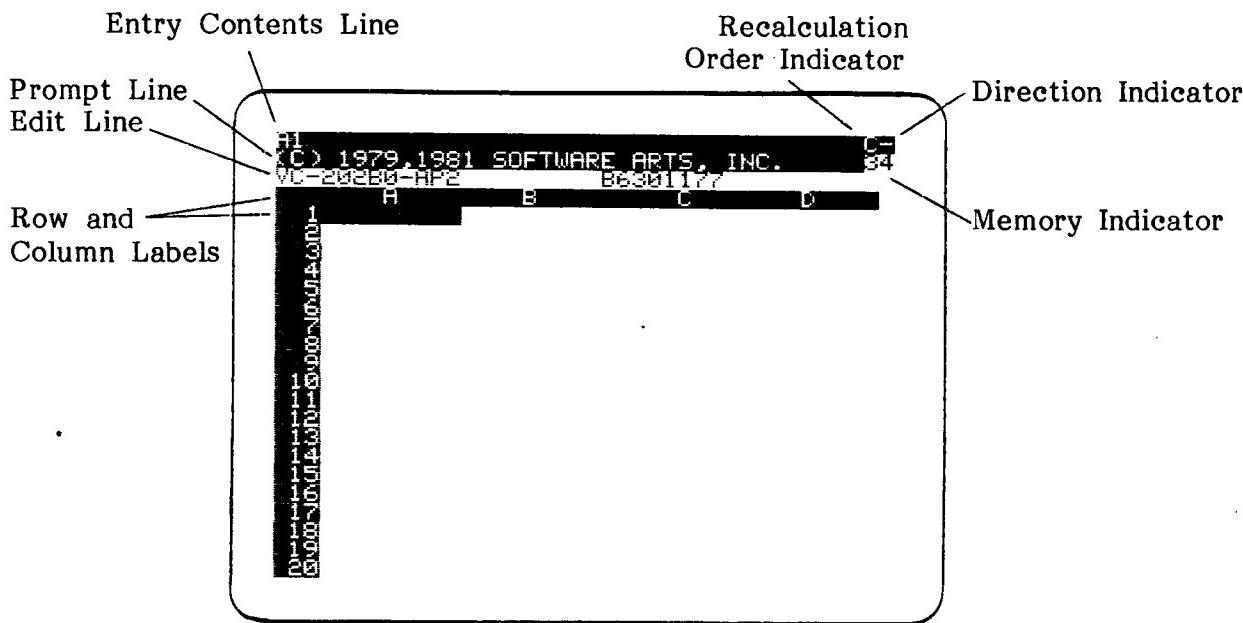
3.   <u>Press **RETURN**.</u> The Prompt Line and the Edit Line are now blank.

4.   Notice the letters "A," "B," "C," and "D" across the upper portion of the screen. These indicate the spreadsheet COLUMNS. Notice the numbers 1 through 20 down the left edge of the screen. These indicate the spreadsheet ROWS. You are looking at the upper left corner of your electronic spreadsheet. You can see the first four columns (A-D) and the first twenty rows (1-20).

Storage cells are found at the intersection of rows and columns. At the intersection of column A and row 1, "A1," you should see a white rectangular bar. Storage cell "A1" on your screen contains a white rectangular bar. This bar is called the CURSOR.

5. Press the **SPACE BAR** several times. Watch the direction indicator (see above screen) change from "!" to "-" and back to "!" again. Stop with the direction indicator displaying an "!".

6. Press the → key four times. Notice that the cursor moved vertically from cell "A1" to cell "A5".

7. Press the ← key four times. Notice that the cursor moved back vertically to cell "A1." When the direction indicator is "!" the cursor will move vertically when you press the arrow keys. This is called vertical cursor motion.

8. Press the ← key several more times. Notice that sound. This indicates that you are at the top edge of the VisiCalc spreadsheet.

9. Change the direction indicator to display "-" (use the space bar). Press → key three times to move cursor to coordinate "D1."

10. When the direction indicator is "-" the cursor will move horizontally when you press the arrow keys. This is called horizontal cursor motion.

11. Watch the column headings as you press the → key one more time. Column "A" has disappeared off the left edge of the screen, and Column "E" has appeared on the right edge of the screen. This is known as "scrolling."

    It might be helpful to think of your screen as a window that slides around on the worksheet.

12. Continue pressing the → key until you have scrolled to cell "AB1." The first 26 columns are lettered "A" through "Z." The next 26 columns are lettered "AA" through "AZ." The last 11 columns are lettered "BA" through "BK."

13. There is a faster way to scroll across the spreadsheet. Hold down the **REPT** key while you press the → key. Continue holding down the **REPT** and → keys until you hear the familiar sound which indicates that the cursor is at the right edge of the spreadsheet (cell BK1). NOTE: The Apple //e does not have the REPT key. To repeat a character on the //e, simply hold down the key for that character.

14. Change the direction indicator to vertical cursor motion.

15. Press the → key 19 times to move down the column to cell BK20.

16. Watch the row headings as you press the → key one more time. Row "1" has disappeared off the top edge of the screen and Row "21" has appeared on the bottom edge of the screen. This is an example of vertical scrolling.

17. There is also a faster way to scroll up/down the spreadsheet. Hold down the **REPT** key while you press the → key. Continue holding down the **REPT** and → keys until you hear the familiar sound which indicates that the cursor is at the bottom edge of the spreadsheet. Your cursor should be at cell BK254.

18. Notice that the Entry Line (see above screen) always shows the location of the cursor. It now indicates cell BK254.

19. Move the cursor to cell A1. Again, notice that the Entry Line shows you that the cursor is at cell A1.

```
┌─────────────────────────────────────────────────────────────┐
│                    A QUICK REVIEW                           │
│                                                             │
│   The VisiCalc spreadsheet has up to 63 columns across and  │
│   254 rows from top to bottom.                              │
│                                                             │
│   The direction indicator is on the Entry Line in the upper │
│   right corner of the screen.   To change the direction     │
│   indicator, press the SPACE BAR once.                      │
│                                                             │
│   Horizontal motion direction indicator is a hyphen (-).    │
│                                                             │
│   Vertical motion direction indicator is an exclamation point│
│   (!).                                                       │
│                                                             │
│   Use arrow keys to move the cursor one cell at a time.     │
│                                                             │
│   The REPT key can be used to more quickly move the cursor. │
└─────────────────────────────────────────────────────────────┘
```

20.   Using the REPT key allows you to move the cursor more quickly.   However, there is still a better way!

While you hold down the **SHIFT** key, press the **>** key.   (This is found on the same key with the period.)

Notice that the Prompt Line (see above screen) now displays the message "GO TO: COORDINATE."   This means that the computer is waiting for you to tell it which coordinate (cell) you want to go to.

Also, notice that the Edit Line (see above screen) now has the edit cue (the small blinking box) in the left corner.

21.   Press **B5** and look at the Edit Line.   It now has a "B5" on it followed by the edit cue.   The computer is still waiting for you.   It does not know if you want it to go to B5 or B50, B52, B58, etc.

22.   To tell the computer that you want to go to B5, press **RETURN.**   The cursor has moved to cell B5.   Notice also that the Entry Line shows you that the cursor is at cell B5.

CORRECTING MISTAKES

1.   You will   now learn how   to use   the ESC   key to change incorrect entries. Press   **>   D18** – Do **not** press RETURN!

2.   Suppose you want to change this to cell D9, press the **ESC key twice.**   The edit cue has backed up and removed the 18.

3.   Now press **9 and press RETURN** to tell the computer to move the cursor to cell D9.

Whenever you key in an incorrect entry, remember to use the ESC key to back up and make the correction.   (This is different from the usual back-up procedure in most computer programs!)

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4.   Use the GO TO: COORDINATE command (>) to move the cursor to:

BK254
AM101
AZ3
T58
A1

Use this procedure whenever you have to move the cursor more than a few cells.

```
                    A QUICK REVIEW

        The  GO  TO  command  can  be  used  to  move
        the  cursor  quickly  to  widely  separated  parts
        of  the  spreadsheet.    It  is  indicated  by  " > ".

        The  ESC  key  can  be  used  to  correct  mistakes.
```

USING PREPARED TEMPLATES

You will now learn how to load a template into the computer's memory. A template is a special spreadsheet which has been prepared for your use.

1.   Insert the MECC Template Diskette into the disk drive 1.   Close the disk drive door.

2.   Press / – The Prompt Line now displays the letters which stand for the VisiCalc commands available. You don't know yet what all these commands do. Today you will learn only one. That one is the storage command, "S".

3.   Press S to indicate that you want the storage command. The Prompt Line should read STORAGE:LSDIQ#. These are the storage options.

4.   Press L to load. The Prompt Line now displays STORAGE: FILE TO LOAD. The edit cue (the blinking white box on the Edit Line) indicates that the computer is waiting for you to key in a particular file name.

5.   Enter **TEMPLATE NO. 1.VC** and press **RETURN.** The red disk drive light should go on while the computer loads this template into its memory.

On the screen, you are now looking through the window which displays a portion of the contents of "TEMPLATE NO. 1.VC".

You will use this template to complete Handout 3. This worksheet will help you review the commands used to move the cursor.

6.   Complete Handout 3 – "Finding Your Way Around" and turn it in to your instructor.

```
┌─────────────────────────────────────────────────┐
│                                                 │
│              A QUICK REVIEW                     │
│                                                 │
│          Displaying a Stored Template           │
│                                                 │
│   The "/" displays a list of VisiCalc commands  │
│   on the Prompt Line.                           │
│                                                 │
│   To display a stored template:                 │
│                                                 │
│          a)    press /                          │
│          b)    press the storage command S      │
│          c)    press the load command L  and    │
│          d)    type in the template name        │
│                                                 │
└─────────────────────────────────────────────────┘
```

If time remains,
begin Lesson 2.

Student Note: Before starting this lesson, you will need the following materials:

1) VisiCalc Diskette
2) Blank Diskette
3) Handout 4 - "Baseball Income"

Warning! If you are continuing from Lesson 1, turn off your Apple and reload the VisiCalc diskette. After you finish Lesson 2, you will know how to use the /C command to clear a template rather than reload VisiCalc.

INITIALIZING A DATA DISKETTE

The first thing you will do in this lesson is use a blank diskette to prepare a data diskette for use in storing your own spreadsheets. This process is called **initializing**.

1. Load VisiCalc into your Apple computer. When the red disk drive light goes off, remove the VisiCalc diskette from the disk drive, put it in the protective envelope, and return it to its storage place.

2. Insert the blank data diskette into disk drive 1. Close the disk drive door.

3. Press the / key. The Prompt Line now displays the entire list of VisiCalc commands available.

4. Press the S key. The Prompt Line now displays the 6 storage options available.

5. Press I to choose the initialize option. The Prompt Line now reads "INIT DISK: TYPE RETURN ERASES DISK."

   The Edit Line displays the slot and drive numbers. This will probably be ",S6,D1". The blinking square is the edit cue.

6. Press **RETURN**. The red disk drive light will come on. The initialization process will take 1 to 1-1/2 minutes. When this is done, the Prompt and Edit lines will clear.

A QUICK REVIEW

Initializing a Data Diskette:

a) load VisiCalc; remove
b) insert Data Diskette
c) press / key
d) press S key
e) press I key
f) press **RETURN**

PUTTING LABELS ON THE SPREADSHEET

You will now learn how to type words and numbers into the VisiCalc spreadsheet. We will begin by labeling a row. Make sure your direction indicator is in the horizontal position.

1.   If the cursor is not already at cell A1, move it there.

2.   Enter the word **SCHOOL** - If you make a mistake, you should use the ESC key to back up and correct the word.

      The Prompt Line displays the word LABEL. If the contents of a cell is a label, the contents may not be used for calculations.

      The Edit Line displays the word SCHOOL, followed by the edit cue.

3.   Press **RETURN.** The label SCHOOL remains as the contents of cell A1.

4.   Use the **>** command to move the cursor to cell C5. Enter the label **LEARN** - Press RETURN.

5.   Use this procedure to enter the following labels in the cells given:

            D1   GREAT
            D5   ABOUT
            A5   PLACE
            B1   IS
            B5   TO
            C1   A
            C9   COMPUTERS

      This is the procedure you should use whenever you wish to enter labels.

      NOTE: You have already learned that you can use the ESC key to make corrections. The ESC key may also be used to back out of an entire command. You will now have a chance to try this use of the ESC key.

6.   Move the cursor to cell H25. Key in **VIKINGS** - Press the **ESC** key 7 times. This backs up the edit cue to the beginning, but the word LABEL is still on the Prompt Line.

7.   Watch the Prompt Line as you press the **ESC** key one more time. The Prompt Line is now blank. You have just backed out of the LABEL command entirely. The ESC key may be used in this way to back out of any command.

8.   Suppose you want to use % Inc. as a label. Press the % key once. It doesn't work. VisiCalc uses % to indicate a value, not a label.

9.   You can use % as a label by typing a special symbol. Press " once. THE QUOTATION MARK WON'T APPEAR ON THE SCREEN but notice that the Prompt Line displays the word LABEL. Enter % Inc. Press RETURN and notice that % Inc. is now a label.

Practice entering the following labels using the quotation mark:

Cell	E2	% Inc.
	F5	$ Gained
	G3	#'s Gain

Remember that the quotation mark will tell VisiCalc that you want to enter a LABEL.

CLEARING THE SCREEN

You will now learn how to clear the screen.

1.   <u>Press /</u> – The prompt line displays the VisiCalc commands.
2.   <u>Press C</u> to indicate that you want to clear the spreadsheet from the screen.   The prompt line displays CLEAR: TYPE Y TO CONFIRM. VisiCalc is giving you a chance to change your mind. If you type a Y, the screen will clear.   If you type anything else, the command will disappear and the screen will remain.
3.   <u>Press Y</u> to clear the screen.

Be very careful when you use this command. Once you clear the screen, you cannot recover it!

<div style="border:1px solid">

A QUICK REVIEW

To enter a Label in a cell:

    a)   move cursor to cell at which
        you want the label
    b)   type your label (it must start
        with a letter or a quote (")
        mark)
    c)   press **RETURN**

To correct typing errors, the ESC key can be used. It can also cancel a command.

It is necessary to clear the screen before loading another template.

To clear the screen:
    a)   press **/**
    b)   press **C**
    c)   press **Y**

</div>

ENTERING VALUES ON THE SPREADSHEET

You will now learn how to enter values onto the VisiCalc spreadsheet.

1.   Clear the Prompt and Edit Lines by <u>pressing **RETURN.**</u>

2.   <u>Enter **500**</u> - The Prompt Line displays the word VALUE. A value is a term for a number or formula. A value must begin with a number or special symbol. (You will learn what these special symbols are and how to use them as you continue through the lessons.)

The Edit Line displays "500" followed by the edit cue.

3.   <u>Press **RETURN.**</u> The value "500" becomes the contents of cell A1.

The Entry Line displays the cell number "A1", tells you that the content is a value (V), and also gives you the value of the cell "500."

4.   <u>Move the cursor to cell D20.</u> <u>Enter **13500**</u> (When entering values on a VisiCalc spreadsheet, you cannot use commas).

5.   <u>Press **RETURN**</u> to enter this value into cell D20.

6.   Use this procedure to <u>enter the following</u> values in the cells given:

        C10   6000
        A20   7800
        D1   54

This is the procedure you should use whenever you wish to enter values.

7.   <u>Press **/CY**</u> to clear the screen.

8.   Clear the Prompt and Edit Lines by pressing **RETURN.**

9.   Make sure the direction indicator is in the horizontal position.

10.   <u>Enter in the value **20**</u> but DO NOT press the **RETURN** key.

11.   <u>Press the ➤ key once.</u> Notice that the value 20 is stored in cell A1, and the cursor has moved to the right to cell B1.

If you are entering values or labels on a single line, you should use the "➤" key. This will save you time by moving the cursor to the next cell to the right.

12.   <u>Enter the value **40** in cell B1.</u> Use the "➤" key to enter the value and move the cursor to cell C1.

You will use this data in the "Entering Formulas" section of this lesson, so <u>do not</u> clear the screen.

```
┌─────────────────────────────────────────────────────┐
│                   A QUICK REVIEW                    │
│                                                     │
│   To enter a value in a cell:                       │
│                                                     │
│           a)  move cursor to the cell at            │
│               which you want the value to           │
│               appear                                │
│           b)  type your value (it must be           │
│               a number or a special value           │
│               symbol)                               │
│           c)  press RETURN                          │
│                                                     │
│       Moving the cursor will cause VisiCalc to store│
│       a value in a cell without pressing RETURN.    │
│                                                     │
└─────────────────────────────────────────────────────┘
```

ENTERING FORMULAS ON THE SPREADSHEET

You will now learn how to write formulas that will direct VisiCalc to perform specific calculations.

1. The first formula will add the contents of cell A1 and the contents of cell B1 and store the answer in cell D1. The fastest way to get the cursor to cell D1 is to press the �targetkey one time. Do that now to move the cursor to D1.

2. Change the direction indicator to the **vertical** position, so that when you enter the formula, the cursor will move to cell D2.

3. Enter **A1+B1** – Notice that the Prompt Line displays the word LABEL. Because our formula begins with the letter A, VisiCalc thinks this expression is a label. In order for VisiCalc to accept A1+B1 as a value, you must enter a plus sign (+) in front of the formula.

4. Correct this by pressing the **ESC** key 6 times. This erases our formula and the LABEL command. Make sure this direction indicator is in the vertical position.

5. Now enter **+A1+B1** – Notice that the Prompt Line now displays VALUE.

6. Watch cell D1 as you press the �targetkey.
    Notice that the answer to the formula is now stored in cell D1.

    Also, notice that because the direction indicator is in the vertical position, the cursor moved DOWN one cell, to cell D2.

7. Enter **+A1–B1** and press the �targetkey once. The answer to the formula is now stored in cell D2. The cursor has moved to D3.

8. Enter the following formulas in the cells given: (Remember to use + at the beginning of the formula.)

    D3   A1*B1   (this will multiply)
    D4   A1/B1   (this will divide)

You now should have four numbers in column D (60, -20, 800, and .5). Unless you have a terrific memory, you probably don't know what these numbers represent. There is a way you can find out.

9. Make sure your direction indicator is in the vertical position. <u>Press the ←</u> <u>key once</u> to move the cursor back to cell D4.

Look at the Entry Line. It displays the cell number "D4", tells you that the contents are a value (V), and also gives you the formula for cell D4 "+A1/B1".

10. <u>Continue to press the ← key</u> as you watch the Entry Line. As the cursor passes over each cell, you can see the formula for that cell in the Entry Line. <u>Stop the cursor at cell D1.</u>

The contents of the cells in column D have no meaning by themselves. Let's put explanations in column C for the values in column D.

11. <u>Move the cursor to cell C1.</u>

12. <u>Enter **A+B=** and press **RETURN.**</u>

Look at your screen. Notice that "40", the contents of cell B1, runs together with the contents of cell C1.

You will now learn how to correct this.

13. <u>Press the / key.</u>

14. <u>Press the B key</u> to choose the BLANK option.

The Prompt Line displays the word BLANK.

15. <u>Press **RETURN**</u> to blank out cell C1.
Warning! The /B command removes formulas, too. If you are simply correcting errors, use the ESC key.

16. <u>Enter "</u>

Notice that the prompt line now displays LABEL. The quotation mark (") does not show on the screen.

17. <u>Press the **SPACE BAR** two times.</u>

18. <u>Enter **A+B=** and press **RETURN.**</u> The label A+B= is stored in C1, but it is not running into B1.

19. <u>Make sure the direction indicator is in the vertical position</u> and enter the following labels in the cells given:

C2   A-B=
C3   A*B=
C4   A/B=

By putting the labels in column C, you have made your spreadsheet easier to read and understand.

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Read through the following review, but do NOT clear the screen. You will be using this spreadsheet after the review.

A QUICK REVIEW

To use a formula to enter a value in a cell:

    a) move cursor to cell
    b) enter **+** followed by your formula
    c) press **RETURN** or move cursor to enter answer in cell

To see the formula a cell operates on:

    a) move cursor to cell
    b) note Entry Line

To format labels:

    a) move cursor to cell
    b) enter quotation mark (**"**)
    c) space across cell to starting position of label

To clear the contents of a cell (including formulas):

    a) press **/**
    b) press **B** and **RETURN**

Now let's see what VisiCalc can really do for you!

20. <u>Move the cursor to cell A1.</u>

21. <u>Enter **60**</u> but DO NOT press return.

22. Watch the screen carefully as you <u>press **RETURN.**</u> Notice the changes in column D.

23. Now change the contents of cell A1 to "80" and watch the changes in column D, as you <u>press RETURN.</u>

24. Use this procedure to <u>enter the following values</u> in cell B1:

      60
      80
     100

DOING SUMS AND AVERAGES

You will now learn how to enter commands that will direct VisiCalc to perform some specific functions. You will enter in some values and direct VisiCalc to find the sum and the average for these values.

1.   Clear the screen and enter the following values in the cells given:

        B10   25
        B11   100
        B12   63
        B13   138
        B14   86

2.   Enter the following labels in the cells given:

        A10   RON
        A11   KAREN
        A12   SALLY
        A13   CLAUDIA
        A14   DUANE
        A16   SUM IS
        A18   AVG IS

3.   Move the cursor to cell B16.

4.   Enter @SUM(B10. . .B14) to tell VisiCalc to calculate the sum of cells B10 through B14. (Notice that when you enter the first period after B10, VisiCalc automatically enters the next two periods for you!)

5.   Press **RETURN.** VisiCalc automatically calculates the sum of these cells and places the answer (412) in cell B16.

      Notice that the Entry Line displays the formula used to calculate the contents of cell B16.

6.   Move the cursor to cell B18.

7.   Enter @AVERAGE(B10. . .B14) to tell VisiCalc to calculate the average of these cells B10 through B14.

8.   Press **RETURN.** VisiCalc automatically calculates the average of these cells and places the answer (82.4) in cell B18.

9.   Change the value in cell B10 to **75** and watch the sum and average change accordingly.

10.   Change the values for the following names. (Be sure to watch the sum and average change as you enter each new value.)

        Karen   125
        Sally   82
        Claudia   130
        Duane   90

SAVING SPREADSHEETS

You will need to use this spreadsheet in another lesson. Therefore, you will need to learn how to save it on your data diskette. Once a template is saved, you will be able to load it into the computer from your data diskette rather than having to re-enter the data manually.

1. Move the cursor to cell A1. (The cell the cursor is in when you save a file is the same cell the cursor will be in when you reload that file.)

2. Press /

3. Press S to display the storage commands.

4. Press S again to choose the SAVE option.

    Notice that the Prompt Line displays STORAGE: FILE FOR SAVING. This means that the computer is waiting for you to give the file a name before it can be stored.

5. Make sure your initialized data diskette is in drive 1.

6. Enter LESSON 2-1.VC as the file name.

7. Press RETURN.

    The disk drive red light comes on to indicate that the file is now being saved on your data diskette.

8. You are now ready to complete Handout 4 - "Football Income."
    Complete this handout and turn it into your instructor.

```
A QUICK REVIEW

To sum the contents of cells:

        @SUM(list)
        Press RETURN
The "list" of cells to be summed is shown by
keying the first cell coordinates followed by
a period and the last coordinates; e.g., @ SUM
(C5...C10)


To average the contents of cells:
        @AVERAGE(list)
        Press RETURN


To save a spreadsheet:
        Make sure your initialized data diskette
          is in drive 1.
        Press /SS
        Type:  Name of template
```

If time remains,
begin Lesson 3

Student Note: Before starting this lesson you will need the following materials:

           1)   VisiCalc Diskette
           2)   Student Data Diskette

Today you will use the VisiCalc spreadsheet to solve some problems. You will make use of skills you have learned in Lessons 1 and 2. If you are continuing directly from Lesson 2, omit the next 3 steps below.

1.   <u>Load VisiCalc.</u> Remove diskette and return it to its storage place.

2.   <u>Insert your Data Diskette.</u> <u>Press **/SL**</u>

3.   <u>Recall template:</u>

           LESSON 2-2.VC

The Football Game

You are responsible for the income made at school football games. Your goal is to take in $1200 at each game.

Prior to each season you must estimate attendance for both students and adults and set ticket prices.

Your income from ticket sales is supplemented by food sales at the concession stand. You have found from experience that on the average each adult spends $1.25 and each student spends $1.75 on food.

INITIAL VALUES

1.   You will enter values on your template. Some values will be dollars. If you enter $1.80, VisiCalc will display it as 1.8 unless you use a special command. This special command causes VisiCalc to display $1.80 as 1.80. The command is /F$. You will learn how to use this command below:

2.   The values you will start with are shown below. Enter the values following the procedure shown for each one:

          Adult Ticket Cost:

          a.   <u>move cursor to C1</u>
          b.   <u>press **/F$**</u> (Watch the Entry Line)
          c.   <u>press **1.6**</u>
          d.   <u>press RETURN</u>
          Note the information on the Entry Line is C1 /F$ (V) 1.6. Note the value in cell C1 is 1.60.

Student Ticket Cost:

a. <u>move cursor to C3</u>
b. <u>press /F$</u>
c. <u>press 1.25</u>

Expected Adults:

a. <u>move cursor to C5</u>
b. <u>press 150</u>
Note this value is not a dollar value. The /F$ command to format for dollars is not needed.

Expected Students:

a. <u>move cursor to C7</u>
b. <u>press 200</u>

TICKET SALES INCOME

You will now be working with longer formulas. As you do this, be careful to make entries only when told to do so!

1. Creating the formula for expected ticket sales income:

The expected ticket income from adults attending the game is calculated by:

expected adults * adult price = ticket income from adults

The VisiCalc formula uses storage cell locations. Therefore the formula above is shown as:

C5 * C1 = ticket income from adults

The expected income from students attending the game is calculated by:

expected students * student price = ticket income from students

The VisiCalc formula would be:

C7 * C3 = ticket income from students

The total ticket income would be:

ticket income from adults + ticket income from students = total ticket income

The completed VisiCalc formula would be:

+ ((C5 * C1) + (C7 * C3)) = total ticket income

inside parenthesis	outside parenthesis
tells VisiCalc to	indicates the total
perform these	value to be entered
operations first	is the result of the
	total operation

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2. Using the formula for total ticket income:

    a)   move the cursor to cell D10.
    b)   Press /F$ and watch the Entry Line.
    c)   Enter the formula: +((C5*C1)+(C7*C3))
    d)   Press RETURN. Look at the formula in the Entry Line and the results of the formula (490.00) in cell D10.

FOOD SALES INCOME

1. Creating the formula for expected food income.

The expected income from food for adults is calculated by:

expected adults * estimated food per adult = food income from adults

Using storage cell locations, the formula is shown as:

C5 * 1.25 = food income from adults

The expected income from food for students is calculated by:

expected students * estimated food per student = food income from students

Using storage cell locations, the formula is shown as:

C7 * 1.75 = food income from students

Total expected food income would be:

food income from adults + food income from students = food income

+((C5*1.25)+(C7*1.75)) = food income

2. Using the formula for food income:

    a)   move cursor to cell D13.
    b)   press /F$, and watch the Entry Line.
    c)   enter the formula: +((C5 * 1.25)+(C7 * 1.75))
    d)   press RETURN. Look at the formula in the Entry Line and the results of the formula (537.50) in cell D13.

TOTAL INCOME

1. Finding total income:

    Total expected income would be:

    ticket sales income + food sales income = total expected income

    To calculate this you will use the VisiCalc Sum Command:

    @SUM(D10.D13) = total expected income

    This will sum all the values in cells D10 through D13.

2. Using the sum function to calculate total income:

    a. move the cursor to cell D17
    b. press /F$, watch Entry Line (you are calculating a dollar value)
    c. enter the sum function: **@SUM(D10.D13)**
    d. press **RETURN**
        The sum of cells D10 through D13 (1027.50) stored in cell D17.

USING THE TEMPLATE

1. It's homecoming! Change the value for expected students from 200 to 350. Watch the contents of the other cells. (Total = 1477.50)

2. You are playing the state championship team. Your season record is 1-13. Change the expected attendance to 125 for students and 50 for adults. Watch what happens to the totals on your template. (Total = 517.50)

3. In an effort to raise more money for the athletic department, it was decided to raise the adult ticket price by 50¢ and the student ticket price by 25¢. Make these changes and see what happens. (Total = 573.75)

4. Change the spreadsheet back to these assumptions:

    Adult price 1.75
    Student price 1.25
    Expected Adults 150
    Expected Students 200

These changes should result in the total income = $1050.00.

5. Save your template. Give it the title: LESSON 3.VC.

If time remains,
continue with Lesson 4.

A QUICK REVIEW

To format an individual cell to show 2 decimal places:

/F$

Student Note: Before starting this lesson you will need the following materials:

    1.   VisiCalc Diskette
    2.   Student Data Diskette

You will now see how powerful VisiCalc really is and what it can do. If you are continuing directly from Lesson 3, omit the next 4 steps.

    1.   <u>Load VisiCalc</u>. Remove diskette and return it to its storage place.
    2.   <u>Insert your Data Diskette</u>.
    3.   <u>Press /SL</u>
    4.   <u>Load template</u>: LESSON 3.VC

Assume that you want to raise ticket prices so as to have income of $1200 per game. Both adult and student prices should be increased by the same percentage. There are several ways that this can be done, but you will learn the easiest and most useful way.

<u>Add the following labels to your spreadsheet</u>. (Remember to use the quotation mark (") before a label that does not begin with a letter or to correct spacing errors.)

        E1   INC PRICE   (This stands for increase in price.)
        E3   INC PRICE
        E10   TICKET
        E13   FOOD
        E17   INCOME
        E20   % INC.

You will now create formulas that will allow you to calculate new ticket prices for any percent increase. As you do this, be careful to make entries only when told to do so!

What we want to do is to be able to enter any percentage into cell F20 and let VisiCalc automatically calculate the new ticket prices as well as the new income totals. To do this:

    1)   <u>Move cursor to F1</u>

        You will need to change the percent increase to a decimal. The formula to do this is:

        percent/100 (the percentage divided by 100).

        We will use cell F20 to store the percent increase; therefore, the formula becomes F20/100. To calculate the new ticket price, you take the old ticket price (C1) and multiply it by the decimal equivalent (F20/100) and then add it to the old ticket price (C1), giving the following formula:

        +(C1*(F20/100))+C1

    2)   <u>Enter the formula into F1</u>, using the $Format (/F$): +(C1*(F20/100))+C1. When you enter this, the new price will still be 1.75, because you have not yet entered a percentage in F20.

3) <u>Move cursor to F3.</u>

You will need to use the same kind of formula to calculate the new ticket price for students:

+(C3*(F20/100))+C3   (Where C3 is the old <u>student</u> price.)

4) <u>Enter the formula in F3,</u> using the $ format (/F$): +(C3*(F20/100))+C3. Notice again that the price did not change because you have not yet entered a percentage in F20.

The next step is to calculate estimated income based on the <u>new</u> ticket prices. You will use the same formulas as you did for the old ticket price.

The formula to calculate expected ticket income from adults is expected adults (C5) * new adult price (F1):   C5 * F1.

The formula to calculate expected ticket income from students is expected students (C7) * new student price (F3):   C7 * F3.

These two formulas must be added together to calculate the total income from ticket sales:

+((C5*F1)+(C7*F3)).

5)   a.   <u>Move cursor to F10.</u>
     b.   <u>Format for $</u>
     c.   <u>Enter the formula:</u> +((C5*F1)+(C7*F3)).

6)   Since the food income will not change, you can direct VisiCalc to copy the amount that is in D13 and place it in F13. To do this:

     a.   <u>Move cursor to F13</u>
     b.   <u>Format for $</u>
     c.   <u>Enter +D13</u>   (This tells VisiCalc to copy D13 into F13.)

7)   Your last step is to add the new ticket income (F10) and the food income (F13) to get total new income: +F10+F13.

     a.   <u>Move cursor to F17</u> and <u>enter this formula,</u> using the $ format: +F10+F13.

8)   FINALLY, you are ready to try out some percentages in cell F20.

     a.   <u>Move to F20</u>
     b.   <u>Enter 10</u> (This means that you want to increase both adult and student ticket prices by 10%).
     c.   Watch column F as you <u>press RETURN.</u> Total income should be $1101.25. If not, go back and check your formulas.

The original problem stated that you want total income to be $1,200.00. Do some experimenting with F20, trying different percentages until total income is near $1,200.00.

Now you are seeing VisiCalc at its best! By changing one number, it is recalculating all other cells automatically!

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Try to obtain other income levels: $1300
                                        $ 800
                                        $2000

9)   Since you have worked so hard, let's save this template, but use the
        same title as you did before: LESSON 3.VC.

        a.   Enter /SS
        b.   Enter: LESSON 3.VC and press RETURN. The prompt line reads:
                STORAGE: FILE EXISTS, Y TO REPLACE.

This is telling you that you already have a file titled LESSON 3.VC. VisiCalc is
asking you if you want to replace the old file with this new file. If so, you would
enter Y. If do not want to do this, you would press any other key.

You do want to replace it, so press Y – The file will be saved as LESSON 3.VC.

                        If time remains,
                        continue with Lesson 5.

Student Note: Before starting this lesson you will need the following materials.

      1)   VisiCalc Diskette
      2)   Student Data Diskette

In this lesson you will learn one of the most useful commands of VisiCalc. It is called the replicate command.

     1.   Load VisiCalc (or clear your screen)
     2.   Insert the student data diskette.
     3.   Move cursor to A1.
     4.   Enter the value 10
     5.   Move cursor to B1.
     6.   Enter the formula +A1 + 10

The spreadsheet should have the value 10 stored in cell A1 and the value 20 stored in cell B1.

Assume that you want the same formula that is in cell B1 (A1 + 10) to be stored in cells C1 through F1. Instead of having to go to each cell and enter the formula, VisiCalc gives you a shortcut method. The following procedure will demonstrate this shortcut.

THE REPLICATE COMMAND

1.   Make sure the cursor is in cell B1.

2.   Press **/R** to choose the replicate command.

     The prompt line displays: REPLICATE: SOURCE RANGE OR RETURN

     The edit line displays: B1, which is the cell where the cursor is. VisiCalc is asking how many formulas you want it to copy. You only want it to copy (or replicate) the formula in cell B1. This is called the source range.

3.   Press **RETURN** to tell VisiCalc that you only want B1 replicated.

     The prompt line now displays: REPLICATE: TARGET RANGE

     The edit line now displays: B1 . . . B1: followed by the edit cue.

     This means that you've told VisiCalc that you want it to replicate (or copy) the formula stored in cell B1—the source range.

     VisiCalc is now asking where you want this formula replicated—the target range. You want it replicated in cells C1 through F1, therefore.

4.   Enter C1.F1 (Notice that when you press the period once, VisiCalc puts in 3 periods.)

5.   Press **RETURN.**

     The cursor remains in cell B1 where the original formula is stored.

The prompt line displays: REPLICATE: N = NO CHANGE, R = RELATIVE

The edit line displays: B1: C1 . . . F1: +A1 with the edit cue on A1.

VisiCalc is asking you if it should use A1 in all the formulas it is replicating (that would be NO CHANGE), or if you want it to use a new cell each time (that would be RELATIVE).

You want it to use A1 in every formula.

6. Watch the screen as you press **N** (for NO CHANGE). The prompt and edit lines are blank. The value 20 appears across the screen.

7. Move cursor to C1.

Notice the formula stored in C1. It is exactly the same formula as is stored in B1.

8. Scroll across to cell F1, noticing the formulas stored in each cell.

9. Move cursor to A1.

10. Change the value of A1 to 20.

Notice that VisiCalc automatically changes the value of cells C1 through F1.

11. Change A1 back to 10.

A QUICK REVIEW

TO REPLICATE A FORMULA:

1. Move cursor to the cell which has the formula you want to copy.

2. Press /R for the replicate command.

3. Indicate the source range—which formula(s) you want copied.

4. Indicate the target range—where you want the formula(s) to be copied.

5. For each coordinate in the formula, indicate N (for NO CHANGE) or R (for RELATIVE).

PRACTICE THE REPLICATE COMMAND

1. <u>Move cursor</u> to cell B2.

2. <u>Enter the formula</u>: +A1+20

3. Replicate this formula in cells C2 through F2 (refer to the Quick Review above).

4. <u>Scroll across the spreadsheet to F2</u>, watching the formula stored in each cell.

    The following values should appear on your spreadsheet:

        Cell A1 = 10
        Cells B1 through F1 = 20
        Cells B2 through F2 = 30

5. <u>Change the value</u> in A1 and watch the other cells change.

6. <u>Return A1 to the value 10.</u>

REPLICATE USING THE RELATIVE FUNCTION

Suppose you want to use a value stored in A3 and keep adding 10 to it for each cell B3 through F3. To do this, you will use the RELATIVE feature of the replicate command.

1. <u>Move the cursor to A3.</u>

2. <u>Enter the value 10</u>

3. <u>Move cursor</u> to B3.

4. <u>Enter the formula</u>: +A3+10

    The value now in cell B3 is 20, which is the same as A3 + 10.

    You now want to add 10 to this value and store it in C3, add 10 to C3 and store it in D3, add 10 to D3 and store it in E3, and add 10 to E3 and store it in F3.

    Again, the replicate command will do this very quickly.

5. Make sure the cursor is at B3.

6. <u>Press /R</u> for the replicate command. VisiCalc is asking for the source range.

7. <u>Press **RETURN**</u> to tell VisiCalc that you only want the formula in B3 to be replicated.

    VisiCalc is now asking for the target range.

8. <u>Enter</u> C3.F3 to tell VisiCalc to replicate the formula in cells C3 through F3. <u>Press **RETURN.**</u>

Visicalc is now asking if you want to use A3 in every formula (NO CHANGE) or if you want this coordinate to be RELATIVE. You do <u>not</u> want to use A3 in every formula. You want the formula in cell C3 to use B3 + 10, the formula in D3 to use C3 + 10, etc. Therefore you want this coordinate to be RELATIVE.

9.   <u>Press **R**</u> (for relative).

The prompt and edit lines go blank.

10.   <u>Scroll across cells B3 through F3.</u> Notice that the formula changes for each cell. Notice also that the value of each cell is different.

11.   <u>Change A3 to 100.</u>

Notice how the values of B3 through F3 change, but the formulas remain the same.

12.   <u>Change A3 back to 10.</u>

PRACTICE THE RELATIVE FEATURE

1.   <u>Move cursor to B3.</u>

2.   <u>Enter the formula:</u>   +A3+20

Notice that the values stored in B3 through F3 changed.

3.   Now duplicate this formula in cells C3 through F3 so that VisiCalc adds 20 to <u>EACH</u> cell (RELATIVE).

When done, you should have the following values in each cell:

     A3 = 10
     B3 = 30
     C3 = 50
     D3 = 70
     E3 = 90
     F3 = 110

Notice the difference between row 2 and row 3. In row 2, you told VisiCalc to use the same coordinate (A1) in <u>every</u> formula (NO CHANGE). That is why cells B2 through F2 all equal 30.

In row 3, you told VisiCalc to add 20 to each cell (RELATIVE). That is why cells B3 through F3 each increase by 20.

The difference between NO CHANGE and RELATIVE is important.

You will now start to set up a template for the Runner's Store, which you will complete in Lesson 6. You will need to use many of the skills you have learned to format and label the cells and to enter data.

The Runner's Store

You are the owner of a small retail store which specializes in a few supplies for runners and joggers. You want to use VisiCalc to predict sales for the coming two quarters. From past years you know the trend for certain products during these quarters. The type of running supplies purchased varies with the weather. For example, the purchase of running shorts will increase by about 20 percent for each of the next six months. Sweat pants will drop by about 10 percent per month for the next quarter.

DESIGNING YOUR SPREADSHEET

1. Clear your screen.

2. Title your spreadsheet: The Runner's Store
                                Sales Projection

    Make sure your title doesn't go below row 5 on your spreadsheet.

3. List the products your store sells on the left side of your spreadhseet in columns A and B. Start with cell A9.

<table>
<tr><td>Jogging Shorts</td><td>Store</td><td>JOGGING S</td><td>in A9</td></tr>
<tr><td></td><td>Store</td><td>HORTS</td><td>in B9</td></tr>
<tr><td>Sweat Pants</td><td></td><td></td><td></td></tr>
<tr><td>Sweat Bands</td><td></td><td></td><td></td></tr>
<tr><td>Sweat Shirts</td><td></td><td></td><td></td></tr>
<tr><td>Taylor Shoes</td><td></td><td></td><td></td></tr>
<tr><td>T-Tops</td><td></td><td></td><td></td></tr>
<tr><td>Wrist Bands</td><td></td><td></td><td></td></tr>
<tr><td>Socks</td><td></td><td></td><td></td></tr>
<tr><td>Zephyr Shoes</td><td></td><td></td><td></td></tr>
</table>

4. You will now learn how to label each of six columns as follows:

Month 1	Month 2	Month 3	Month 4	Month 5	Month 6

    To duplicate a label, you will use the replicate command.

5. a) Move your cursor to cell C7.

    b) Press the quotation mark (") to tell VisiCalc this is a label.

    c) Press the space bar 4 times.

    d) Enter MONTH and then press RETURN. This will move the title to the right side of column C. Rather than type each month, you may replicate cell C7. Follow the replication procedure shown below.

    e) Type /R
        On the prompt line you will see "REPLICATE: SOURCE RANGE OR RETURN." On the edit line you will see C7.

f) VisiCalc wants the coordinates of the source cell you want to replicate. Since you are replicating only cell C7, press **RETURN**.

You should now see on the edit line:

      C7...C7:

This means we want to reproduce only what is in cell C7. Our source range, C7, is a single cell.

g) VisiCalc now wants the coordinate of the target cell(s) (where you want the copy to go).

      Type D7.H7

The edit line should display:

      C7...C7: D7...H7

The source range is on the left side of the colon. The target range is on the right side of the colon.

h) Press **RETURN**

The Label "Month" appears in each of the cells of the target range (D7 through H7). Move your cursor along row 7 to verify this.

6. Next you will replicate a _formula_ which will number the months 1 through 6.

a. Move your cursor to cell C8.
Enter the value 1.

b. Move your cursor to cell D8.

Enter this formula: +(C8+1)
This directs VisiCalc to take the value stored in C8 and add 1 to it.

c. Press RETURN.

The value 2 appears in cell D8.

d. Type /R for replication.

e. VisiCalc wants the coordinates of the source range. Since we are again replicating the contents of a single cell, D8, press **RETURN**.

You should now see on the edit line: D8...D8:
This means that we want VisiCalc to replicate the formula found in D8.

Visicalc now wants the coordinates of the target range (where it is to be duplicated).

f. Type E8.H8 to tell VisiCalc that we want it to take the formula that is stored in D8 and replicate it in cells E8 through H8.

LESSON 6

Before starting this lesson, you will need the following materials.

    1)   VisiCalc Diskette
    2)   Student Data Diskette
    3)   Handout 5 — "The Runner's Store"

If you are continuing directly from Lesson 5, skip steps 1 through 3 below.

1.   Load VisiCalc. Remove diskette.
2.   Insert Student Data Diskette.
3.   Load LESSON 5.VC Template.
4.   You will now finish setting up the template you began in lesson 5.
5.   Based on past years, you can make some assumptions about sales which will help project your income for the next six months.

The items whose sales will increase and the amounts of their increase are shown below:

Jogging Shorts	+ 10% per month
Sweat Bands	+ 5% per month
T-Tops	+ 10% per month
Wrist Bands	+ 20% per month
Zephyr Shoes	+ 5% per month

The items which show no change are:

Taylor Shoes
Socks

Items the sales of which will decrease and the amount of their decrease over the next six months are:

Sweat Pants	- 5% per month
Sweat Shirt	- 2% per month

6.   Enter the following gross sales for Month 1:
Do not format for $.

Jogging Shorts	$ 549
Sweat Pants	650
Sweat Bands	125
Sweat Shirts	469
Taylor Shoes	478
T-Tops	150
Wrist Bands	78
Socks	210
Zephyr Shoes	1129

7.   The formulas for the cells in Column D (Month 2) showing growth of sales are shown on the chart:

Item	Inc./Dec.	Cell	Formula
Jogging Shorts	+10%	D9	+C9*1.1
Sweat Pants	− 5%	D10	+C10*.95
Sweat Bands	+ 5%	D11	+C11*1.05
Sweat Shirts	− 2%	D12	+C12*.98
Taylor Shoes	No Change	D13	+C13
T. Tops	+10%	D14	+C14*1.1
Wrist Bands	+20%	D15	+C15*1.2
Socks	No Change	D16	+C16
Zephyr Shoes	+ 5%	D17	+C17*1.05

Enter the formulas in the cells given.   Do not format for $.

8.   Once the formulas have been entered, your spreadsheet should contain the following values in each cell:

Cell	Value
D9	603.9
D10	617.5
D11	131.25
D12	459.62
D13	478.
D14	165.
D15	93.6
D16	210.
D17	1185.45

9.   Replicate the formulas just entered in column D for the remaining four months as follows.

To replicate the formula for jogging shorts:

a.   Move your cursor to cell D9.
b.   Press **/R**
c.   Press **RETURN** (sets the source range as the formula in cell D9).
d.   Press **E9.H9** (sets the target range—where the formula is to be replicated).
e.   Press **RETURN.** VisiCalc is asking if C9 is NO CHANGE or RELATIVE.
The sales projections given in this problem are for each month. For example, the sales of jogging shorts will increase 10% each month, based on the previous month's sales. This means that the coordinate in the formula is relative. The formula for E9 should use the value stored in D9. The formula for F9 should use the value stored in E9, etc.
f.   Press **R** for Relative.
g.   Scroll across row 9 looking at the formula and the value of each cell.

10. Repeat this procedure for the formulas stored in cells D10 through D17.

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11. Notice the values are to four decimal places. Since these are gross dollar sales, we need them formatted for dollars. This can be done by using a command which will change the entire sheet at once.

12. Press **/G** for the global command. ("Global" means that it will affect the entire spreadsheet.)
The Prompt line displays: GLOBAL: C O R F

13. Press **F** for Format.
The Prompt line displays: FORMAT: D G I L R $ *

14. Press **$** to format in dollars and cents. As you do this, the entire spreadsheet is changed to the $ format. Notice, however, that the number of each month has also changed to the $ format. You will now change the number of each month back to an integer.

15. Move the cursor to cell C8.

16. Press **/FI** to change the format of this cell only to Integer (whole numbers).

17. Move the cursor to cell D8. Format to I as you did above.

18. A new shortcut! Instead of having to format E8 through H8 individually, you can use the replicate command to replicate the format as well as the formula.

19. Replicate the formula stored in D8 in cells E8 through H8. Notice that the $ format is replicated along with the formula!

20. It would be nice the see the totals for each month. Add a column total for each of the six months by doing the following:

   a. Move the cursor to cell A19.
   Enter the label **TOTAL**

   b. Move the cursor to cell C18.
   Enter dashed lines by pressing **/-** This tells VisiCalc to repeat a symbol across the entire column. The next symbol you type will be repeated. Press the hyphen key (-), and then press **RETURN.**

   c. Replicate the dashed lines for all columns.

   d. Move the cursor to cell C19.
   Sum the values in Column C by entering:

   @SUM(C9...C17)

   e. Replicate the summing for all columns. Notice that when VisiCalc asks for NO CHANGE or RELATIVE, it does so for both coordinates in the formula. In this case, both are RELATIVE, so you must enter R two times!

   f. Scroll across row 19 to study the formula stored in each cell.

21. Save your template as follows:

   a. Press **/SS**
   b. Type LESSON 6.VC.

22. Complete Handout 5 - "The Runner's Store"

If time remains,
continue to Lesson 7

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Student Note: Before starting this lesson you will need the following materials:

      1.   VisiCalc Diskette
      2.   Your Data Disk
      3.   Handout 6 - "Record Sales"

Today you will be keeping track of record sales for a record store for the month of August. You will learn about several new VisiCalc formatting functions as you do this.

These functions include commands which will allow you to scroll across the VisiCalc spreadsheet while keeping the row labels on the screen, and scroll down the spreadsheet while keeping the column labels on the screen. You will also learn how to use dashed lines to format your spreadsheet.

Commands which you will review in this lesson include formatting dollars, formatting whole numbers, and replication.

PROCEDURE

(If you are continuing directly from Lesson 6, clear your screen and omit steps 1 and 2 below.)

1.   LOAD VisiCalc.

2.   Insert your Data Diskette.

3.   Format and label the spreadsheet as shown below:

     a.   Label the spreadsheet: put the title RECORD SALES FOR AUGUST in cells B1 through E1. Add the following labels in the cells specified. Use the quotation mark (") to space the labels to make them easy to read.

Label	Cell
Rec. Type	A4
Sales	B4
%Sales	C4
Accurate	D4
Accurate	E4
To .00	D5
To Whole	E5
Classical	A7
Country	A9
Rock	A11
Jazz	A13
Popular	A15
Tot.Sales	A18

b.   Putting lines on your spread sheet. To put dotted lines on your chart, you will use / and - keys. <u>Move your cursor to cell A16.</u>

> <u>Press /-</u>   (This tells VisiCalc that you want it to repeat some symbol across all of A16.) VisiCalc is now waiting for you to tell it which symbol you want repeated.
>
> <u>Press -</u>
> <u>Press **RETURN**</u>
> <u>Replicate this line in cells B16 through E16.</u>

4.   <u>Formatting Cells</u>   Use the dollar format to set up your cells. <u>Type /F\$ to format the following cells:</u>
        B7   B9   B11   B13   B15   B18

5.   <u>Creating a Formula for % Sales.</u> The ratio of current sales to total sales is calculated by dividing sales (B7) by total sales (B18). By multiplying the result by 100 we find the percent of sales. <u>Enter the following formula in cell C7.</u>

> **+((B7/B18)*100)**   Notice that ERROR is printed in cell C7.

Lets take a look at the ERROR message in C7. It is there because the formula stored in the cell is divided by the value stored in B18. At this point, you do not have a value in B18; therefore, VisiCalc is dividing by zero and it results in an ERROR message.

6.   To eliminate this error message:

> a.   <u>Move the cursor to B18.</u>
> b.   <u>Enter: **@NA**</u> (which stands for Not Available)
> c.   <u>Press **RETURN.**</u>

Notice that C7 now displays NA. In fact, all formulas that include B18 in them will now result in an NA message. You will leave the NA message in B18 until you enter the amount of sales later in this lesson.

7.   Replicate the formula for all five types of records as follows:

> a.   <u>Move the cursor to C7.</u>
> b.   <u>Press **/R**</u>
> c.   <u>Press **RETURN**</u> to identify C7 as your source range.
> d.   <u>Enter: **C9**</u> (Since you only want it replicated in C9, this is your target range). <u>Press **RETURN.**</u>
> VisiCalc is asking if you want the coordinate B7 to be the same (No Change) or if you want it to be relative to the position.
> e.   <u>Enter **R** for Relative.</u>
> It is now asking if you want the coordinate B18 to be the same (No Change) or if you want it to be relative to the position. Since you want B18 to be the same in all formulas, <u>PRESS **N** (for No Change).</u>

8.   <u>Repeat this procedure for:</u>   C9   C11   C13   C15

Note: Each cell must be done individually (using the replicate command).

9. Format Column D to Dollars.

    a.   Move the cursor to D7.
    b.   Format to dollars.
          Note entry line contains D7/F$. Formatting to dollars will cause VisiCalc to round to the hundredths place (two decimal places).
    c.   Enter the formula for % sales in cell D7:

        +((B7/B18)*100)

    d.   Replicate this formula in cells D9, D11, D13, D15. (Use the same procedure as above!)

10. Format Column E to Whole Numbers.

    a.   Move the cursor to E7.
    b.   Enter **/FI** (note entry line E7/FI rounds to the nearest whole number)
    c.   Enter the formula for % sales in cell E7:

        +((B7/B18)*100)

    d.   Replicate this formula in cells E9, E11, E13, E15.

Note: You cannot replicate across columns because we have changed formats between columns (/FI, /F$). "Replicate" also replicates format commands.

11. Set Titles.

The Titles command allows you to fix rows and columns in place so that they remain in view as you scroll the window over the worksheet.

The position of the cursor at the time you initiate the Titles command determines which column(s) and/or row(s) the VisiCalc program will fix as titles.

    a.   Move the cursor to A7.
    b.   Press **/TV**

        /TV, the Vertical Titles command, fixes all columns at and to the left of the cursor. Thus, if you wanted to fix columns A and B, you would position the cursor anywhere on B. If you wanted to fix only column A, you would place the cursor on column A.

    c.   Move the cursor over several columns to the right. Notice that column A is always visible on the screen. Move the cursor back to the left and note that the cursor will go no further than cell B7. The only way to move the cursor to column A is to use the GO TO (>) command.

    d.   Move the cursor to B6.
    e.   Press **/TH**

        /TH, the Horizontal Titles command, fixes all rows at and above the cursor. Thus, if you wanted to fix rows 1 and 2 as titles, you would place the cursor anywhere on line 2. If you wanted to fix only row 1, you would place the cursor on row 1.

f.   Move the cursor down several rows. Notice that rows 1 through 6 are always visible on the screen. Move the cursor back several rows and note the cursor will go no further than cell B7.

The only way to move the cursor above row 7 is to use the GO TO (>) command.

g.   Move the cursor to A6.
h.   Press /TN

/TN negates the Titles Command. You can remove titles by typing /TN with the cursor at any position on the worksheet.

i.   Move the cursor down several rows and back up and note the limits have been removed.
j.   Move the cursor across columns to right and back. Note the limits have been removed.
k.   Move cursor to A6.
l.   Press /TB

/TB fixes both row(s) and column(s) at the same time. The rows will be fixed at and above the cursor and the columns will be fixed at and to the left of the cursor. For example, if you wanted to fix rows 1 and 2 and column A, you would position the cursor at A2.

m.   Move the cursor across the columns and down rows to see what limits have been set in both directions.

12.   Save your Template.

a.   Call this template LESSON 7.VC.

b.   Clear spreadsheet:
        Type /CY

13.   Recall your Template.

To scroll the catalog of lessons you have saved:

a.   Press /SL
b.   Press ➡ key to scroll catalog
c.   Continue scrolling the catalog to find LESSON 7.VC.
d.   When you find LESSON 7.VC, press RETURN. VisiCalc will load this file. You can use this procedure to load a file if you forget the exact name.

14.   Complete Handout 6, "Record Sales," before continuing.

15.   Printing your Spreadsheet:

    a.   Always move your cursor to cell A1 before printing.
    b.   Press /P - note prompt line.
    c.   Press **RETURN**; note prompt line. VisiCalc wants to know the lower right-hand cell to be printed, which is E18.
    d.   Press **E18**
    e.   Make sure your printer is turned on.
    f.   Press **RETURN.** The Spreadsheet will be printed.

If time remains,
continue to Lesson 8

LESSON 8

Student Note: Before starting this lesson, you will need the following materials.

        1)   VisiCalc Diskette
        2)   Student Data Diskette

Lesson 8 will teach you three ways of correcting mistakes. You will review skills from previous lessons and learn ways to make your template more versatile through the use of Global Commands. If you are continuing directly from Lesson 7, omit Step 1 below, and clear your screen.

    1.   Load VisiCalc. Remove Diskette.
    2.   Insert your Data Diskette.

EDITING

VisiCalc allows you to correct mistakes through the use of several editing procedures. Follow the procedure described below to change an entry:

1.   Editing using the ESC key:

    a.   enter a label by typing **GARBAGE** (do not press RETURN).
    b.   eliminate this label by pressing **ESC** until GARBAGE has disappeared from the Edit line and LABEL has disappeared from the prompt line. This is one way to edit.

This procedure should be used when you have made an error, but have not yet pressed the return key.

2.   Editing using the CTRL-E Key:

    a.   move cursor to F10.
    b.   Enter the formula:
              +(F1*C20)+(F3*C15) and do not press RETURN.
    c.   Press CTRL and E at the same time.
          Notice the prompt line displays [EDIT] : VALUE and the cursor remains at the end of the formula.

You are now ready to edit the formula. You will change C20 to C5.

    d.   Press the ← key 10 times (cursor is on parenthesis).
    e.   Press ESC 2 times to remove the 20.
    f.   Enter 5 – Do not press RETURN.
    g.   Use the → key and ESC to change C15 to C7.
    h.   When both changes have been made, press RETURN to enter the formula.

This procedure (CTRL E) should be used when you have made a small error in a long formula, but have not yet pressed the return key. When you use this method, you do not have to retype the entire formula.

3.   Editing using the /E command:

    a.   Move cursor to F11.
    b.   Enter the VisiCalc formula:
            +(F1*C20)+(F3*C15) and press RETURN.
            Since you have pressed the RETURN, you cannot correct the entry by using the above procedure. To correct the entry:
    c.   Press /E for the edit command. This allows you to correct errors in formulas without retyping the entire formula.

Notice that the Edit Line displays the formula for cell F11 with the cursor at the beginning. You will learn how to change C20 to C5.

    d.   Press ➡ key 8 times (cursor is on parenthesis).
    e.   Press ESC 2 times to remove the 20.
    f.   Enter in 5
    g.   Press RETURN to store the corrected formula in cell F11.

This procedure (/E) should be used when you have made a small error in a long formula and have already entered it by pressing RETURN. When you use this method, you do not have to retype the entire formula.

4.   Practice this procedure by changing C15 to C7.

A FINAL REVIEW

1.   Clear your template by typing /CY.

2.   Enter the following labels in the cells indicated:

	A	B	C	D
1	VISICALC	COSTS	ABOUT	$120
2				
3	IS			
4				
5	VERY			
6				
7	POWERFUL			
8				

3. Using the /B command, change $120 to $250, and change VERY to EXTREMELY.

4. Clear the screen (use /C).

5. Load in file **LESSON 2-1.VC** from your Student Data Diskette.

6. Enter **KENT** in cell A9.

    Notice that the sum of the values 502 and the average is 100.4.

7. Enter **85** in cell B9.

    Notice that the sum and average did not change even though there is an additional score in the list. Let's see why they did not change.

8. Move the cursor to B16.

    Look at the Entry Line. The formula tells the computer to add cells B10 through B14 only. That is why the score in cell B9 is not included in the sum.

9. Press **/E** to choose the EDIT command.

    Notice that the Edit Line displays the formula stored in cell B16: @SUM(B10...B14).

10. Press the ⟶ key 8 times to move the edit cue so that it is after the "10" (which is the incorrect portion of the formula).

11. Press the **ESC** key 2 times to delete the number 10.

12. Enter in "9" (the correct cell).

13. Notice the sum of the numbers (587), as you press RETURN. The value in B9 (85) has been included in the sum.

14. Using this same procedure (see 9 through 13), correct the formula used to obtain the average of the numbers. (AVERAGE should equal 97.83333.)

GLOBAL COMMANDS

The next part of Lesson 8 will show you how to use the "/G" (GLOBAL) commands:

1. Enter /G to use the GLOBAL command.

2. Press **F** to choose the FORMAT option.

    The GLOBAL FORMAT command will change the entire spreadsheet visually. It will look different, but the data actually stored in memory does not change.

3. Watch the screen as you press the $ key. The "$" told the computer to change all values to display two decimal places (as if you wanted to show dollars and cents).

4.	Enter /G

5.	Press **F**

6.	Watch the screen as you press the I key. The "I" told the computer to change all values to display integers only.

	Even though the value shown in cell B18 is an integer, the decimal portion of this value has not been lost. The entire original value is still stored in memory.

7.	Enter /G

8.	Press F

9.	Watch cell B18 as you press G

	The "G" told the computer to go back to the GENERAL (original) format.

10.	Enter /G to enter the GLOBAL command.

11.	Press **R** to choose the RECALCULATION option.

	This option will allow you to choose if you want the computer to calculate formulas as you enter the data or wait until you have all the data entered and then perform all the calculations.

12.	Press **M** to choose the MANUAL option. This tells the computer to wait to perform the calculations until you manually give it a direction to complete the calculations.

13.	Increase all values in cells B9 through B14 by 5 points.

	Notice that the sum (587) and average (97.83333) did not change as you entered the data.

	You now need to tell the computer to complete the calculations for sum and average.

14.	Watch the sum and average as you press !. The "!" told the computer that you wanted it to complete the calculations. (Sum = 617; Average = 102.8333).

	The MANUAL RECALCULATION option is still in effect and will remain until you change the GLOBAL command.

15.	Enter /GR to choose the GLOBAL RECALCULATION option.

16.	Press **A** to tell the computer to return to the AUTOMATIC RECALCULATION option. This means that VisiCalc will recalculate automatically whenever you enter a value.

17.	Enter /G to enter the GLOBAL command.

18. Press **O** to choose the ORDER OF RECALCULATION option.

This option lets you choose whether you want the rows or columns calculated first.

19. Press **R** to tell the computer to calculate the rows before it calculates the columns.

Notice that the letter next to the direction indicator has changed to "R" to indicate that ROWS are being calculated before COLUMNS.

NOTE: This command will very seldom affect any values unless you have a large, complex spreadsheet.

20. Return the ORDER OF RECALCULATIONS to COLUMNS by entering **/GOC**

A QUICK REVIEW

Making corrections:

1. If you have not pressed RETURN
    a. Use ESC key to back up and erase.
    b. Use CTRL E to correct longer formulas to avoid retyping the entire formula.

2. If you have pressed RETURN
    a. Use /E to correct without having to retype the entire formula.

GLOBAL COMMANDS

/GF$	Entire spreadsheet is set up with 2 decimal places
/GFI	Entire spreadsheet is set up as integers
/GFG	Entire spreadsheet is set up in GENERAL (original) format
/GRM	VisiCalc will not calculate formulas until directed with !
/GRA	VisiCalc automatically calculates as each entry is made
/GOC	VisiCalc calculates column by column
/GOR	VisiCalc calculates row by row

Congratulations! You've completed the Lessons. Continue on with your problem application if you have been assigned one.

PROBLEM APPLICATIONS

CASH PROOF

The Sullivan Shoe Store, sellers of the really big shoe, would like you to develop on VisiCalc a Cash Proof sheet that could be used each day at the close of business.

Cash is proved at the end of each day by the following simple formula:

Cash Sales
+   Cash Received on Account
=   Total Cash Received

Cash in drawer should equal Total Cash Received to be in balance. If cash in drawer is less, then cash is short. If cash in drawer is more than Cash Received, then cash is over.

Set up a spreadsheet on VisiCalc for a simple cash proof. Store the spreadsheet on your student data diskette with only titles and formulas using the file name CASH PROOF. Use global formatting for dollars and cents.

Use the following cells to record your data in:

CASH SALES	C3
CASH RECEIVED ON ACCOUNT	C5
TOTAL CASH IN DRAWER	C7
CASH OVER (- SHORT)	C9
TOTAL CASH RECEIVED	C13

Insert the following data set on your VisiCalc spreadsheet. Then answer whether cash is short or over and by how much.

Cash Sales	350.00
Cash Rec'd on Acct.	150.00
Cash in Drawer	502.00

Cash Over (- Short)   _____

Now try these data sets:

	SET 1	SET 2	SET 3
Cash Sales	459.50	123.49	386.85
Cash Rec'd on Acct.	225.00	225.75	113.59
Cash in Drawer	683.85	350.00	499.00
Cash Over (- Short)	_____	_____	_____

PAPA's PIZZA PARLOR

You need: VisiCalc Diskette
MECC Template Diskette

Papa's Pizza Parlor keeps its inventory on VisiCalc. You are in charge of keeping stock on hand and therefore must enter data, determine if an item must be reordered and amounts to reorder. It is also important that you know the total value of your inventory.

1. Load VisiCalc.
2. Insert MECC Template Diskette.
3. Load **TEMPLATE NO. 3.VC**
4. Enter the following data for stock on hand:

	cost/unit	on hand	maximum	minimum
Pepperoni	.95	165	250	100
Sausage	1.25	190	200	100
Mozzarella	1.10	115	200	100
Tomato Sauce	.87	18	60	15
Herb Blend	2.10	12	25	10
Mushrooms	.67	110	90	30
Ripe Olives	.98	12	25	10
Onions	.47	112	115	75
Canadian Bacon	1.98	120	125	90
Flour	.49	190	300	150
Shortening	1.42	110	125	50
Salt	.08	11	25	10

5. Go to cell G8.
   Write down the formula from the entry line._____

   The value for D8 is the amount of pepperoni on hand.

   The value for H8 is the amount of pepperoni which has been used.

   The value for F8 is the point at which pepperoni must be reordered (the minimum amount you can have on hand). If the amount of D8 + H8 is less than F8, a numeral 1 is placed in the cell. This would mean that pepperoni should be reordered.

   Which items need to be reordered:

   _____   _____

   _____   _____

   _____   _____

6. List the total value of the inventory. _____

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7. How does your template find a total value for the amount of each item you have on hand? (see cell J8)

_____

8. If you have a negative value in your amount to reorder column, what does this indicate? _____

   Which item has a negative value? _____

   Since you are dealing with perishables, what might you need to do to solve this problem?

_____

9. At the end of Friday you enter the amounts of the various items which have been used that week. First change the date on the template from 1/15/83 to 1/22/83. Enter these amounts:

Pepperoni	78	Herb Blend	5	Canadian Bacon	70
Sausage	40	Mushrooms	20	Flour	152
Mozzarella	92	Ripe Olives	5	Shortening	70
Tomato Sauce	10	Onions	50	Salt	5

Now list which items need to be reordered and the amount to reorder:

Item	Amount	Item	Amount
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

10. List the total value of the inventory. _____

11. Go to cell I8.

    Note the formula in the cell: **+((E8-(D8-H8))**

    Describe the value each cell in the formula contains:

    E8 _____   D8 _____   H8 _____

    Describe what happens when this formula operates.

_____

PERSONAL BUDGET

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 4.VC

3. This is a personal budget spreadsheet. Move the cursor so that you scroll across all the columns. There are expense categories (columns E through M), a total income column (column B), a total expense column (column C), and a column that calculates the difference between total income and total expenses (column D).

   Move the cursor so that you scroll down all the rows. There is one row for each month of the year as well as a TOTALS row which will total each column. This spreadsheet will be completed for Julie, a high school junior working part time and living at home. She is paying some board and room.

4. Begin completing this spreadsheet by entering Julie's estimated income for each month of the year as follows:

January through May	=	200.00 per month
June, July, August	=	300.00 per month
September through December	=	225.00 per month

5. Julie must pay $25 per month during the school year and $30 per month in June, July, and August for room and board. Enter these amounts under housing. How much is her yearly housing cost? $ _____

   As you enter these amounts, notice that VisiCalc automatically calculates the total expense and the difference between income and expense.

6. Julie is trying to save for a vacation trip with her friends in July. She will need $120.00 for the trip. Therefore, she is hoping to save $20.00 each month from January through June.

   Enter this estimated savings for those months.

7. Julie usually spends approximately $60.00 on Christmas gifts. She will begin saving for this in July and continue through December saving $10.00 per month.

   Enter this estimated savings. How much is Julie planning to save this year? $ _____

8. School expenses are usually 20.00 per month (except June, July, and August). However, she will be having her senior pictures taken in August. She will have to pay $80.00 for this. Her parents will pay the rest.

   Enter $20.00 for school expenses during the school year and $80.00 for August.

   Her total school expenses for the year are $ _____.

9. Julie must pay a portion of the car insurance as well as buying her own gas each month. This amounts ot 40.00 per school month. Since she drives more in the summer, her gas bill is $50.00 during June, July, and August.

Enter these amounts in the transportation column.

Her transportation expenses for the year are $ _____.

10. Julie contributes approximately $10 per month to her church and other organizations. However, in August she will contribute an additional $10 to United Way.

Enter these amounts in the Contribution column. Julie's estimated contributions for the year equal $ _____.

11. Julie must purchase her own personal care items such as cosmetics, hair cuts, and shampoo. This costs approximately $30 per month all year long.

Enter these estimates. How much does Julie expect to spend this year on personal care? $ _____

12. Clothing, food, and recreation costs vary greatly from month to month. Before Julie estimates these expenses, she would like to know how much income she has left. Fill in the following chart. It will let Julie see approximately how much she can budget in each category.

	Total Income	Total Expenses	Difference
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			

13. Julie estimates that her food (away from home) will cost $20.00 per school month and $40.00 per summer month (June, July, and August).

Enter this in the food column. Total yearly food costs are $ _____.

14. Julie has only two categories left to estimate. These are flexible and she needs to know how much money she has left. Fill in the following chart.

Difference

January	$_____
February	$_____
March	$_____
April	$_____
May	$_____
June	$_____
July	$_____
August	$_____
September	$_____
October	$_____
November	$_____
December	$_____

15. Let's look at Julie's clothing budget. She would like to buy new clothes for her vacation and for school in September.
Is this possible? _____

How? _____

16. Enter the following amounts for Julie's clothing budget:

January - May	=	$20.00/month
June	=	$100.00
July	=	$80.00
August	=	$20.00
Sept. - Dec.	=	$50.00/month.

Total clothing budget $ _____

17. Julie will probably spend the rest of her money on recreation each month. Enter these amounts on the spreadsheet.

Fill in the following chart:

Month	Recreation
January - May	$ _____
June	$ _____
July	$ _____
Aug. - Dec.	$ _____

18. Julie's budget should now be "in balance." That means that her income equals her expenses. If she would be laid off or cut back at work, what will she have to do to her expenses?

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19. If she decides to buy a new $70.00 ski outfit in November, list two ways she could come up with this amount.

    1.

    2.

20. If you have access to a printer, print out a copy of Julie's budget and attach it to this worksheet.

COMPOUND INTEREST COMPARISON

1. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

You have $100 to deposit in a savings account. You have learned that there are different types of accounts that accrue interest at varying rates. Enter the following data related to the savings accounts you have checked. See how much interest will be earned if the money is invested for different lengths of time at varying interest rates.

Principal	Interest Rate	Years
100.00	5.250	.25
100.00	5.250	.50
100.00	5.250	.75
100.00	5.250	1.00
100.00	5.250	5.00
100.00	5.250	10.00
100.00	6.000	5.00
100.00	6.500	5.00
100.00	7.250	5.00
100.00	11.500	5.00
100.00	12.364	5.00
100.00	12.500	5.00

Answer the following questions based on the table you have generated.

NOTE: This template is currently set up for global manual recalculation. (See Lesson 8.)

Interest Rate	Years	Interest Earned if Compounded:		
		Daily	Quarterly	Annually
5.25	1	_____	_____	_____
5.25	5	_____	_____	_____
5.25	10	_____	_____	_____
7.25	5	_____	_____	_____
12.50	5	_____	_____	_____

Which will earn more interest?

1. $100 at 5.25% for 10 years _____
2. $100 at 12.5% for 5 years _____

What is the difference if compounded daily? _____

2. Load VisiCalc. Remove Diskette.

   Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

   Check to see what the ending value of a $1000 investment will be if
   invested at a constant interest rate, but for a varying number of years.
   Enter the following data relative to the investment to determine what the
   ending values will be.

Principal	Interest Rate	Years
1000.00	10	1
1000.00	10	2
1000.00	10	3
1000.00	10	4
1000.00	10	5
1000.00	10	6
1000.00	10	7
1000.00	10	8
1000.00	10	9
1000.00	10	10
1000.00	10	20
1000.00	10	30

   Answer the following questions based on the table you have generated.

   NOTE: This template is currently set up for global manual recalculation.
   (See Lesson 8.)

   Ending value of $1000 invested at 10% for:

Years	Daily	Compounded: Quarterly	Annually
1	_____	_____	_____
5	_____	_____	_____
10	_____	_____	_____
30	_____	_____	_____

   How much more interest is earned over a thirty year period if interest is
   compounded daily rather than quarterly? _____

   Quarterly rather than annually? _____

   Daily rather than annually? _____

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3. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

Enter the following data related to the investment of $100 at varying rates of interest for varying numbers of years.

Principal	Interest Rate	Years
100.00	5.25	5
100.00	6.50	5
100.00	7.00	5
100.00	7.50	5
100.00	9.00	5
100.00	10.50	5
100.00	11.75	5
100.00	13.50	5
100.00	15.75	5
100.00	16.00	5
100.00	17.00	5
100.00	18.00	5

Answer the following questions based on the table you have generated.

NOTE: This template is currently set up for global manual recalculation. (See Lesson 8.)

How great a difference is there in interest earnings on $100 invested for five years for each example listed:

Interest Rate	Interest Earned if Compounded:					
	Daily	Monthly	Quarterly	Semi-Annually	Annually	Difference
5.25	_____	_____	_____	_____	_____	_____
7.50	_____	_____	_____	_____	_____	_____
11.75	_____	_____	_____	_____	_____	_____
18.00	_____	_____	_____	_____	_____	_____

TRAVEL EXPENSE REPORT

1. Load VisiCalc. Remove Diskette.

   Using the MECC Template Diskette, load TEMPLATE NO. 6.VC

   Enter the following expense report data for business trips your boss made last month.

#4
EXPENSE REPORT

Cost per mile = 21?

DATE	FROM	TO	MILEAGE	COST	BREAK	LUNCH	EVENING	HOTEL	OTHER	BUS/TAX
8	St. Paul	Minneapolis	22	4.62	0.00	0.00	13.00	0.00	0.00	2.25
10	St. Paul	Bloomington	23	4.83	0.00	0.00	0.00	0.00	0.00	1.75
11	St. Paul	Minneapolis	20	4.20	0.00	0.00	0.00	0.00	0.00	1.50
16	St. Paul	New Hope	58	12.18	0.00	0.00	0.00	0.00	0.00	0.00
18	St. Paul	Chisago	63	13.23	0.00	5.50	9.78	0.00	0.00	0.00
20	St. Paul	Stillwater	47	9.87	0.00	5.60	0.00	0.00	0.00	0.00
21	St. Paul	Brooklyn Park	59	12.39	0.00	4.26	0.00	0.00	0.00	0.00
24	St. Paul	St. Cloud	156	32.76	4.25	6.54	9.95	0.00	0.00	0.00
25	St. Paul	Hopkins	48	10.08	0.00	3.88	0.00	0.00	0.00	0.00
27	St. Paul	Duluth	183	38.43	3.89	5.35	12.00	32.39	0.00	0.00
28	Duluth	St. Paul	167	35.07	4.58	4.99	0.00	0.00	0.00	0.00
29	St. Paul	Eden Prairie	59	12.39	0.00	4.15	0.00	0.00	0.00	0.00
30	St. Paul	Willmar	127	26.67	4.58	5.42	9.67	0.00	0.00	0.00
31	Willmar	St. Paul	135	28.35	0.00	4.67	0.00	0.00	0.00	0.00

Answer the following questions based on the expense report you created.

Total miles driven _____

Cost of mileage _____

Lunch expense _____

Hotel expense _____

Total expense for the 11th day of the month _____

TOTAL EXPENSE FOR MONTH _____

2. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 6.VC

Enter the following expense report data for business trips your boss made last month.

<div align="center">

#5
EXPENSE REPORT

</div>

Cost per mile = 22¢

DATE	FROM	TO	MILEAGE	COST	BREAK	LUNCH	EVENING	HOTEL	OTHER	BUS/TAX
3	St. Paul	Hutchinson	170	37.40	0.00	5.50	9.76	0.00	0.00	0.00
5	St. Paul	Belle Plaine	125	27.50	0.00	4.98	0.00	0.00	0.00	0.00
6	St. Paul	Minnetonka	52	11.44	0.00	3.75	0.00	0.00	0.00	0.00
7	St. Paul	Bemidji	237	52.14	4.45	5.97	10.45	0.00	0.50	0.00
8	Bemidji	St. Paul	245	53.90	4.70	5.85	9.67	0.00	0.00	0.00
10	St. Paul	Mounds View	33	7.26	0.00	3.85	0.00	0.00	0.00	0.00
12	St. Paul	Moorhead	249	54.78	2.95	6.40	10.98	38.52	1.40	0.00
13	Moorhead Vicinity		20	4.40	4.90	6.65	11.70	38.52	0.00	0.00
14	Moorhead	St. Paul	247	54.34	5.25	6.50	0.00	0.00	0.00	0.00
18	St. Paul	Minneapolis	14	3.08	0.00	0.00	10.25	0.00	0.00	2.50
24	St. Paul	Minneapolis	18	3.96	5.50	5.70	12.40	0.00	0.00	3.75
25	St. Paul	Minneapolis	22	4.84	5.37	6.65	13.00	0.00	0.00	4.00
26	St. Paul	New Brighton	27	5.94	0.00	0.00	0.00	0.00	0.00	0.00
30	St. Paul	White Bear Lake	31	6.82	0.00	3.55	0.00	0.00	0.00	0.00

Answer the following questions based on the expense report you created.

What city did your boss travel to on Day 7? _____

Cost of mileage _____

Meal expense _____

Other expense _____

Total living expense for 7th day of the month _____

TOTAL EXPENSE FOR MONTH _____

SERVICE BUSINESS
INCOME STATEMENTS
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 8.VC

3. This spreadsheet will allow you to compile an income statement. You will be able to test the effect of increases in sales and expenses on the net income.

   Enter the following amounts in the appropriate cells:

Sales	=	3000.00
Vending Machines Income	=	900.00
Electricity Expenses	=	800.00
Miscellaneous Expenses	=	175.00
Rent Expenses	=	1500.00

4. Fill in the following amounts:

Total Sales	=	$ _____
Total Expenses	=	$ _____
Net Income	=	$ _____

5. If sales increases to 4000.00, what is the new net income?

   $ _____

6. Increase electricity expense to $1000.00. What is the new net income?

   $ _____

7. Decrease sales to $1775.00. What happens to net income?

   _____

8. Change vending income to -0-. What happens to net income?

   _____

SERVICE BUSINESS
INCOME STATEMENTS
PROBLEM #2

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 8.VC

3. Enter the following amounts in the appropriate cells:

Sales	=	10957.12
Vending Machine Income	=	1568.43
Electricity Expenses	=	3476.51
Miscellaneous Expenses	=	1784.92
Rent Expenses	=	5850.00

4. Fill in the following amounts:

Total Sales	=	$ _____
Total Expenses	=	$ _____
Net Income (− Loss)	=	$ _____

5. Increase the three expenses so that the net income (− Loss) is 0.

   List the expense amounts:

Electricity Expenses	=	$ _____
Miscellaneous Expenses	=	$ _____
Rent Expenses	=	$ _____
Total Expenses	=	$ _____

MERCHANDISING BUSINESS
INCOME STATEMENT
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE No. 14.VC

3. This spreadsheet will allow you to compile an income statement for a merchandising business. You will be able to test the effect of increases in sales and changes in beginning and ending inventory on net income.

    Enter the following amounts in the appropriate cells (see sample template on the next page):

LABEL		AMOUNT	ENTER IN CELL
Sales	=	8000.00	F8
Sales Returned & Allowances	=	200.00	E9
Sales Discount	=	50.00	E10
Beginning Inventory	=	10000.00	G15
Purchases	=	5000.00	F16
Purchases Returned & Allowances	=	300.00	E17
Purchases Discount	=	100.00	E18
Ending Inventory	=	9000.00	G21
Salary Expenses	=	500.00	G28
Store Supplier Expenses	=	25.00	G29
Depreciation Expenses	=	100.00	G30
Advance Expenses	=	30.00	G31
Insurance Expenses	=	75.00	G32
Miscellaneous	=	45.00	G33
Rent Income	=	100.00	F40
Gain on Fixed Assets	=	150.00	F41
Loss on Fixed Assets	=	150.00	F46
Cash Short & Over	=	40.00	F47

4. Fill in the following amounts:

CELL	LABEL	AMOUNT
H12	Net Sales	$_____
G20	Net Purchases	$_____
H23	Cost of Goods Sold	$_____
H25	Gross Profit	$_____
H35	Total Expenses	$_____
H37	Net Income from Operation	$_____
H53	Net Income	$_____

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5.   Increase sales to 12000.   What is the new net income?

$ _____

6.   Decrease ending inventory to 6000.   What is new the net income?

$ _____

7.   Increase beginning inventory to 15000.   What is new the net income?

$ _____

```
        NAME OF BUSINESS


        INCOME STATEMENT
        PERIOD ENDING 4/82

--------------------------------------------------------
INCOME
        SALES
        SALES RET & ALLOW.
        SALES DISCOUNT

        NET SALES


COST OF GOODS SOLD
        BEGINNING INVENTORY
        PURCHASES
        PURCH. RET. & ALLOW.
        PURCH. DISC.

        NET PURCHASES
        ENDING INVENTORY

        COST OF GOODS SOLD

GROSS PROFIT ON SALES
```

```
EXPENSES
        SALARIES EXPENSE
        STORE SUPPLIES EXPENSES
        DEPR. EXPENSE
        ADV. EXPENSE
        INSURANCE EXPENSE
        MISC. EXPENSE

TOTAL EXPENSES


NET INCOME FROM OPERATIONS


OTHER INCOME
        RENT INCOME
        GAIN ON FIXED ASSETS

        TOTAL OTHER INCOME

OTHER EXPENSES
        LOSS ON FIXED ASSETS
        CASH SHORT AND OVER

        TOTAL OTHER EXPENSES

NET ADDITION

NET INCOME
```

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MERCHANDISING BUSINESS
INCOME STATEMENT
PROBLEM #2

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template, load TEMPLATE NO. 14.VC

3. This spreadsheet will allow you to compile an income statement for a merchandising business. You will be able to test the effect of changes in sales, purchases, and inventory on net income.

    Enter the following amounts in the appropriate cells (see sample template on the preceding page):

LABEL		AMOUNT	ENTER IN CELL
Sales	=	20000.00	F8
Sales Returned and Allowance	=	0.00	E9
Sales Discount	=	0.00	E10
Beginning Income	=	10000.00	G15
Purchases	=	15000.00	F16
Purchases Returned and Allowance	=	0.00	E17
Purchases Discount	=	0.00	E18
Ending Inventory	=	9000.00	G21
Salary Expense	=	1000.00	G28
Store Supplies Expenses	=	1000.00	G29
Depreciation Expenses	=	1500.00	G30
Advance Expenses	=	300.00	G31
Insurance Expenses	=	200.00	G32
Miscellaneous Expenses	=	500.00	G33
Rent Income	=	0.00	F40
Gain or Fixed Assets	=	100.00	F41
Loss or Fixed Assets	=	300.00	F46
Cash Short and Over	=	50.00	F47

4. Fill in the following amounts:

CELL	LABEL	AMOUNT
H12	Net Sales	$_____
G20	Net Purchases	$_____
H23	Cost of Goods Sold	$_____
H25	Gross Profit	$_____
H35	Total Expenses	$_____
H37	New Income From Operation	$_____
H53	Net Income	$_____

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5. Increase sales to 25000. What is the new net income?

    $ _____

6. Increase purchases to 22000. What is the new net income?

    $ _____

7. Increase ending inventory to 12000. What is the new net increase?

    $ _____

TRIAL BALANCE
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 9.VC

3. This spreadsheet will allow you to do a trial balance to determine if debits equal credits. Enter the following amounts in the appropriate cells:

PROBLEM #1

Cash	5000.00
Accounts Receivable	2000.00
Inventory	10000.00
Furniture	3000.00
Trucks	8000.00
Office Equipment	1500.00
Accounts Payable	8000.00
Smith, Capital	16100.00
Sales	7000.00
Electrical Expense	500.00
Miscellaneous Expense	250.00
Rent Expense	850.00

Fill in the following totals:

Total Debits   = $ _____

Total Credits   = $ _____

Difference   = $ _____

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM #2

Cash	1250.00
Accounts Receivable	789.00
Inventory	1500.00
Furniture	-0-
Trucks	-0-
Office Equipment	525.00
Accounts Payable	421.00
Smith, Capital	3000.00
Sales	1150.00
Electricity Expenses	120.00
Miscellaneous Expenses	37.00
Rent Expenses	350.00

Fill in the following totals:

Total Debits   = $ _____

Total Credits   = $ _____

Difference   = $ _____

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM #3

Cash	15776.15
Accounts Receivable	7895.07
Inventory	25550.78
Furniture	19764.59
Trucks	15376.95
Office Equipment	5783.46
Accounts Payable	24793.87
Smith, Capital	36613.78
Sales	30547.68
Electricity Expenses	595.47
Miscellaneous Expenses	212.86
Rent Expenses	1000.00

Fill in the following totals:

Total Debits   = $ _____

Total Credits   = $ _____

Difference   = $ _____

If you have access to a printer, print out the trial balance and attach it to this page.

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TRIAL BALANCE
PROBLEM #4

Cash	10765.42
Accounts Receivable	2987.49
Inventory	20468.33
Furniture	1547.00
Trucks	9500.00
Office Equipment	3050.77
Accounts Payable	3403.84
Smith, Capital	23000.00
Sales	20000.00
Electricity Expenses	347.19
Miscellaneous Expenses	89.98
Rent Expenses	647.66

Fill in the following totals:

Total Debits   = $ _____

Total Credits   = $ _____

Difference   = $ _____

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM # 5

Cash	3554.78
Accounts Receivable	2005.01
Inventory	4796.74
Furniture	1769.00
Trucks	4500.00
Office Equipment	1378.66
Accounts Payable	587.56
Smith, Capital	10892.47
Sales	8571.80
Electricity Expenses	350.00
Miscellaneous Expenses	197.64
Rent Expenses	500.00

Fill in the following totals:

Total Debits = $ _____

Total Credits = $ _____

Difference = $ _____

If you have access to a printer, print out the trial balance and attach it to this page.

COMPARATIVE COMMON SIZE BALANCE SHEET

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 10.VC

3. The spreadsheet on the screen is a detailed balance sheet. Scroll down the rows watching to see how the assets are divided into current and fixed. Notice also that liabilities are divided into current and long term. Finally, the equity section gives total equity as well as total liabilities plus equity.

4. Scroll across the columns. Notice that there are 2 columns that give us a comparative balance sheet for 1981 and 1982. This means that we are able to look at the balance sheets for 2 years at one time. This allows us to compare 1982 with 1981 for each item.

   As you scroll further, notice the 2 columns that give us a common size balance sheet for 1981 and 1982. A common size statement changes dollar amounts to percentages so that comparisons are easier. You will be able to see this once you enter the amounts on the spreadsheet.

5. Enter the following amounts in the appropriate cells:

	Comparative	
	1981	1982
Current Assets		
Cash	10000.00	2000.00
Accounts Receivable	2000.00	1000.00
Allow Bad Debts	200.00	200.00
Inventory	15000.00	5000.00
Prepaid Expenses	1500.00	2000.00
Fixed Assets		
Building	35000.00	45000.00
Accumulative Depreciation	5000.00	9000.00
Land	20000.00	20000.00
Equipment	10000.00	13000.00
Accumulative Depreciation	1000.00	1500.00
Liabilities		
Accounts Payable	5000.00	2000.00
Loans Payable	8000.00	10000.00
Notes Payable	10000.00	15000.00
Long-term Liabilities		
Bonds Payable	15000.00	20000.00
Mortgage Payable	17000.00	16000.00
Equity		
S. Hanson, Capital	52300.00	34300.00
S. Hanson, Drawing	20000.00	20000.00

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6. Fill in the blanks:

	1981	1982
Total Assets	$ _____	$ _____
Total Liabilities	$ _____	$ _____
Total Equity	$ _____	$ _____
Total Liabilities & Equity	$ _____	$ _____

7. Look at the columns labeled "common size." The numbers in the cells represent percentages. Notice that all the 1981 asset percentages are added together and total 100% for Total Assets. This means that each asset cell represents a percentage of the total assets in 1981. The same is true for 1982. Each asset cell represents a percentage of the total assets in 1982.

8. Complete the following statements:

   A.   In 1981 Cash was _____ % of total assets.
   B.   In 1982 Cash was _____ % of total assets.
   C.   Cash increased/decreased in relation to total assets.
                 circle one

   D.   In 1981 Current Assets were _____ % of total assets.
   E.   In 1982 Current Assets were _____ % of total assets.
   F.   Current Assets increased/decreased in relation to total assets.
                 circle one

   G.   In 1981 Building was _____ % of total assets.
   H.   In 1982 Building was _____ % of total assets.
   I.   Building increased/decreased in relation to total assets.
                 circle one

   J.   In 1981 Fixed Assets were _____ % of total assets.
   K.   In 1982 Fixed Assets were _____ % of total assets.
   L.   Fixed Assets increased/decreased in relation to total assets.
                 circle one

9. Scroll down through the common size liabilities. Again, the numbers in the cells represent percentages. This time they are percentages of Total Liabilities and Equity. You can see this by looking at the "Total Liab. & Equity" row. The columns add up to 100%.

10. Complete the following statements:

   A.   In 1981 Accounts Payable was _____% of total liabilities & equity.
   B.   In 1982 Accounts Payable was _____% of total liabilities & equity.
   C.   Accounts Payable increased/decreased in relation to total liabilities & equity.   circle one

   D.   In 1981 current liabilities were _____% of total liabilities & equity.
   E.   In 1982 current liabilities were _____% of total liabilities & equity.
   F.   Current liabilities increased/decreased in relation to total liabilities & equity.   circle one

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G. In 1981 Long-term liabilities were _____% of total liabilities & equity.

H. In 1982 Long-term liabilities were _____% of total liabilities & equity.

I. Long-term liabilities increased/decreased in relation to total liabilities & equity.   circle one

J. In 1981 total equity was _____% of total liabilities & equity.

K. In 1982 total equity was _____% of total liabilities & equity.

L. Total equity increased/decreased in relation to total liabilities & equity.   circle one

11. Financial analysts use this kind of statement to determine trends in the financial position of a company. Look through the following numbers and circle the trend for each:

Account	Trend
Accounts Receivable	Increase/Decrease
Allow for Bad Debts	Increase/Decrease
Inventory	Increase/Decrease
Prepaid Expenses	Increase/Decrease
Land	Increase/Decrease
Equipment	Increase/Decrease
Loans Payable	Increase/Decrease
Notes Payable	Increase/Decrease
Bonds Payable	Increase/Decrease
Mortgage Payable	Increase/Decrease
S. Hanson, Capital	Increase/Decrease
S. Hanson, Drawing	Increase/Decrease

1. Load VisiCalc.   Remove Diskette.
2. Using the MECC Template Diskette, load TEMPLATE NO. 7.VC

3. On the screen is the spreadsheet for a Comparative Income Statement.
   You are looking at more than one income statement in comparison to
   another. The advantage of this is that you can compare what has happened
   to revenues and expenses from one year to the next. This makes it easier
   to see trends and to make predictions.

   Scroll down the rows so that you are familiar with the items necessary to
   complete the comparative income statement.

4. Enter the following amounts in the appropriate cells:

	1981	1982
Sales	17000.00	18700.00
Sales Returned & Allowances	1000.00	1500.00
Beginning Inventory	35000.00	39000.00
Purchases	10000.00	0.00
Purchases Returned & Allowances	1000.00	0.00
Ending Inventory	39000.00	35000.00
Rent Expense	2500.00	3000.00
Salaries Expense	5000.00	6000.00
Utilities Expense	1000.00	1000.00

5. Enter the net income for 1981 $_____
   Enter the net income for 1982 $_____

6. State whether the amount increased or decreased from 1981 to 1982 and
   give the amount of the change.

	Kind of change	Amount
Sales	_____	_____
Net Sales	_____	_____
Cost of Merchandise Sold	_____	_____
Gross Profit	_____	_____
Total Expenses	_____	_____
Net Income (-Loss)	_____	_____

7. Notice that sales increased by 10% (from $17000 to $18700). At the same
   time, sales returned & allowances increased by 50% (from $1000 to $1500).
   What does this indicate?

   _____

   _____

   _____

8. What happened to salaries expense from 1981 to 1982?

   _____

   What are some possible reasons for this?

   _____

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DEPARTMENTAL BUDGET

1. Load VisiCalc. Remove Diskette.
2. Using the MECC Template Diskette, load TEMPLATE NO. 11.VC

3. The spreadsheet on the screen is a budget for a bakery which includes two departments: a bakery department and a cafe. The purpose of this spreadsheet is to make projections about revenues and expenses for each department.

4. Move the cursor to cell C10 which includes the amount of electricity expense for the bakery. Look at the formula stored in this cell. Notice that the value stored in this cell is based on the value of cell C6. In other words, the bakery's electricity expense is a percentage of gross sales for the bakery. As you move the cursor down the column, you will see that advertising, delivery, and salary expense are also figured as a percentage of gross bakery sales. If you move the cursor to the cafe column, you will see that electricity, advertising, delivery, and salary expense for the cafe is figured as a percentage of gross cafe sales.

5. Because these expenses are computed this way, once an amount is put in the gross sales cells, amounts will automatically be entered in the expense cells.

   Enter the following amounts in the appropriate cells.

	Bakery	Cafe
Gross Sales	6000.00	9000.00

6. Record the amounts found in the following cells:

	Bakery	Cafe
Electricity	$_____	$_____
Advertising	$_____	$_____
Delivery	$_____	$_____
Salaries	$_____	$_____

7. Move the cursor to cell C9. This is where the value for the bakery's rent expense is stored. Notice the formula for this cell. It is based on cell C20. C9 is 25% of the value of C20. Look at cell C20. It is the total rent for the building. The bakery uses approximately 25% of the total floor space and, therefore, the bakery is charged 25% of the rent.

   Move the cursor to cell D9. Again, the formula for this cell is based on cell C20. However, the rent expense for the cafe is 75% of the total rent.

   Because C9 and D9 are based on C20, entering a value in C20 will automatically place a value in C9 and D9.

   Enter the total rent as $700.00.

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8. Record the amounts found in the following cells:

	Bakery	Cafe
Rent	$_____	$_____

9. Next, determine how any increase in total rent will affect rent expense for each department.

Change the total rent to $900.00.

10. Record the amounts found in the following cells:

	Bakery	Cafe
Rent	$_____	$_____

Bakery Rent increased $_____
Cafe Rent increased $_____

Why did the cafe rent increase more than the bakery rent?

_____

11. Change the gross sales for the bakery to $10000.00.
Change the total rent to $1000.00
Notice how the expenses change.

12. Record the amounts found in the following cells:

	Bakery	Cafe
Gross Sales	$_____	$_____
Rent	$_____	$_____
Electricity	$_____	$_____
Advertising	$_____	$_____
Delivery	$_____	$_____
Salaries	$_____	$_____
Total Expenses	$_____	$_____
Net Income (- Loss)	$_____	$_____

13. A good use of VisiCalc is to try out different numbers to determine projected net income. Keep trying different amounts for cafe gross sales and watch how the net income (- loss) changes.

14. Make sure total rent = $1000.00 and bakery gross sales = $10000.00. What amount of gross sales does the cafe need in order to make approximately the same amount of net income as the bakery?
$_____

15. Change the cafe gross sales to $10000.00 and make sure total rent is $1000.00. What amount of gross sales does the bakery need in order to make approximately the same amount of net income as the cafe?
$_____

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16. If gross sales increase by $500.00 for each department, the net income for the bakery and for cafe do not increase the same amount. Why?

_____

_____

_____

Name_____

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 12.VC

3. This spreadsheet will allow you to complete a balance sheet and then see the relationship between increases/decreases in assets, liabilities, and equity.

   Enter the following amounts in the appropriate cells:

Cash	=	7500.00
Accounts Receivable	=	1800.00
Inventory	=	15525.00
Furniture	=	3050.00
Trucks	=	9000.00
Office Equipment	=	6575.00
Accounts Payable	=	8350.00
Loans Payable	=	10500.00

4. Fill in the following amounts:

Total Assets	=	$ _____
Total Liabilites	=	$ _____
Total Equity	=	$ _____
Total Liability & Equity	=	$ _____

5. Increase furniture to $4050.00.

6. Record the following amounts:

Total Assets	=	$ _____
Total Liabilities	=	$ _____
Total Equity	=	$ _____
Total Liability & Equity	=	$ _____

7. Place an X in the correct column:

	Increases	Decreases	No Change
Total Assets	____	____	____
Total Liabilities	____	____	____
Total Equity	____	____	____
Total Liability & Equity	____	____	____

8. When a company's assets increase, what happens to the equity accounts?

   _____

9. Increase loans payable to $15000.00.

10. Record the following amounts:

Total Assets	$ _____
Total Liabilities	$ _____
Total Equity	$ _____
Total Liability & Equity	$ _____

11. Place an X in the correct column:

	Increases	Decreases	No Change
Total Assets	_____	_____	_____
Total Liabilities	_____	_____	_____
Total Equity	_____	_____	_____
Total Liabilities & Equity	_____	_____	_____

12. When a company's liabilities increase, what happens to the equity accounts?

_____

13. If a company takes out a loan to purchase inventory, both inventory and loans payable should increase.

Increase inventory by $2000.00
Increase loans payable by $2000.00

14. Record the following amounts:

Total Assets $ _____

Total Liabilities $ _____

Total Equity $ _____

Total Liability & Equity $ _____

15. When a company's assets and liabilities increase equally, what happens to the equity accounts?

_____

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BANK RECONCILIATION
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 13.VC

3. Key in the following amounts:

Checkbook Balance	=	3925.56
Service Charge	=	3.50
Bank Balance	=	4857.85
Outstanding Deposit	=	500.00
Outstanding Checks	=	325.86
Outstanding Checks	=	212.59
Outstanding Checks	=	57.34
Outstanding Checks	=	791.15
Outstanding Checks	=	48.85

4. Fill in the following amounts:

Adjusted Checkbook Balance	=	$_____
Total Outstanding Checks	=	$_____
Adjusted Bank Balance	=	$_____

PROBLEM #2

Checkbook Balance   =   127.19
Service Charge   =   1.10
Bank Balance   =   178.15
Outstanding Deposit   =   -0-
Outstanding Check   =   30.00
Outstanding Check   =   22.06

Fill in the following amounts:

Adjusted Checkbook Balance   = $_____
Total Outstanding Checks   = $_____
Adjusted Bank Balance   = $_____

PROBLEM #3

Checkbook Balance   =   857.34
Service Charge   =   -0-
Bank Balance   =   679.84
Outstanding Deposit   =   315.65
Outstanding Check   =   5.19
Outstanding Check   =   25.00
Outstanding Check   =   57.86
Outstanding Check   =   50.10

Fill in the following amounts:

Adjusted Checkbook Balance   = $_____
Total Outstanding Checks   = $_____
Adjusted Bank Balance   = $_____

PROBLEM #4

Checkbook Balance	=	1587.34
Service Charge	=	10.00
Bank Balance	=	1599.58
Outstanding Deposit	=	200.00
Outstanding Check	=	57.86
Outstanding Check	=	93.74
Outstanding Check	=	36.43
Outstanding Check	=	81.10

Fill in the following amounts:

Adjusted Checkbook Balance = $ _____
Total Outstanding Checks = $ _____
Adjusted Bank Balance = $ _____

Notice that this account does not reconcile with the bank statement. Answer the following questions:

a. What is the difference in the two adjusted amounts? _____
b. Circle the statement that is true:
   The checkbook shows a larger balance than the bank.
   The checkbook shows a smaller balance than the bank.

PROBLEM #5

Checkbook Balance	=	56.85
Service Charge	=	-0-
Bank Balance	=	47.78
Outstanding Deposit	=	25.00
Outstanding Check	=	7.00
Outstanding Check	=	7.93

Fill in the following amounts:

Adjusted Checkbook Balance = $ _____
Total Outstanding Checks = $ _____
Adjusted Bank Balance = $ _____

Notice that this account does not reconcile with the bank statement. Answer the following questions:

a. What is the difference in the two adjusted amounts? _____

b. Circle the statement that is true:
   The checkbook shows a larger balance than the bank.
   The checkbook shows a smaller balance than the bank.

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BIG SPEND
EXPENSE REPORT

Develop an Expense Report spreadsheet for Barney Bigspend. Barney's expense report should have one column for each day of the week, Sunday through Saturday, and an Items Totals column. There should be rows for the following items:

— Room charges
— Meals
— Air Fare
— Car rental
— Parking
— Entertainment
— Transportation
— Miscellaneous
— Daily Total

The sum of the Totals column and the sum of the Daily Totals row must be equal.

Now set up your Expense Report spreadsheet using the following data formatted to dollars:

Sunday	-	Air fare to Kansas City	$180
		Cab to hotel	13
		Meals	18
		Transportation to airport	12.50
Monday	-	Meals	25
Tuesday	-	Meals	30
		Entertainment	20
		Transportation	15
Wednesday	-	Meals	25
		Laundry (Misc.)	8
Thursday	-	Meals	35
		Entertainment	45
		Transportation	20
Friday	-	Meals	8
		Air fare return to Cincinnati	180
		Van to airport	10
		Transportation from airport	12.50

Include these expenses:

— room charge $55/day, Sunday through Thursday nights
— total tips for the week $18 (show them all on Friday and include under Miscellaneous)

	Given Data	Hotel = $87.50/day	No Entertainment Allowed	Air Fare = $225 one way
Sunday's Total	____	_____	_____	_____
Wednesday's Total	____	_____	_____	_____
Friday's Total	____	_____	_____	_____
Saturday's Total	____	_____	_____	_____
Daily + Item Sunday	____	_____	_____	_____

E-Z PAYROLL

Set up a spreadsheet for the E-Z Payroll Company using the following payroll information.

Employees are paid according to a salary plus commission plan. Each employee receives $500 per week salary. They also receive a 15% commission on all total sales above $1,000.

Set up columns for Employee Name, Total Sales, Salary, Commission, and Total Pay. Use global formatting for dollars and cents. It will be easier to complete this problem if you fix the employee names and column headings in place and put an underline above the column totals. You are given the following employee data: Names and total sales.

Names	Total Sales
Adams, Tom	1200
Bryant, Ellen	1800
Gordon, Jean	2400
Kelly, Stan	2200
Wallace, Jackie	3800

Develop and replicate a formula for the commission and total pay columns for each employee. In the lower right corner use a formula to calculate for all employees:

    total sales
    total salary
    total commission
    total pay

Store this problem on your Student Data Disk using the name E-Z PAYROLL COMPANY with the original given data.

On the lines provided below, record the data from your screen. Then fill in the remaining columns by editing your data and formulas.

	Given Data	Salary 1000/wk.	Commission 20% of sales 1000	Commission 25% of sales 1000
Total Sales	_____	_____	_____	_____
Total Salary	_____	_____	_____	_____
Total Commission	_____	_____	_____	_____
Total Pay	_____	_____	_____	_____

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ANSWER KEYS

AND

TEMPLATE PRINTOUTS

FOR

PROBLEM APPLICATIONS

EXPLANTORY NOTE

Answer keys for Problem Applications are found on the following pages. Following each answer key is a sample template printout for that problem. The formulas used by the template are listed and correlated with the cell in which it is found on the printout of the template. On each template printout small arrows ($\rightarrow$) are used to point out the cell numbers corresponding to the formulas listed.

Student-designed templates may vary from the sample both in template design and formulas used.

In applications which utilize several sets of data, the template printout will display only one selected set.

CASH PROOF

The Sullivan Shoe Store, sellers of the really big shoe, would like you to develop on VisiCalc a Cash Proof sheet that could be used each day at the close of business.

Cash is proved at the end of each day by the following simple formula:

> Cash Sales
> + Cash Received on Account
> = Total Cash Received

> Cash in drawer should equal Total Cash Received to be in balance. If cash in drawer is less, then cash is short. If cash in drawer is more than Cash Received, then cash is over.

Set up a spreadsheet on VisiCalc for a simple cash proof. Store the spreadsheet on your student data diskette with only titles and formulas using the file name CASH PROOF. Use global formatting for dollars and cents.

Use the following cells to record your data in:

CASH SALES	C3
CASH RECEIVED ON ACCOUNT	C5
TOTAL CASH IN DRAWER	C7
CASH OVER (- SHORT)	C9
TOTAL CASH RECEIVED	C13

Insert the following data set on your VisiCalc spreadsheet. Then answer whether cash is short or over and by how much.

Cash Sales	350.00
Cash Rec'd on Acct.	150.00
Cash in Drawer	502.00

Cash Over (- Short)   **2.00**

Now try these data sets:

	SET 1	SET 2	SET 3
Cash Sales	459.50	123.49	386.85
Cash Rec'd on Acct.	225.00	225.75	113.59
Cash in Drawer	683.85	350.00	499.00
Cash Over (- Short)	-.65	.76	1.44

```
        CASH PROOF DATA SET ONE


CASH SALES          459.50


CASH RCVD

ON ACCT.            225.00


TOTAL CASH

IN DRAWER           683.85


- - - - - - - - - - - - - - - - - - - - -

                 ➔  C13
TOTAL CASH          684.50
RECEIVED


CASH OVER        ➔  C17
(- SHORT)           -0.65
```

CELL FORMULAS

C13:@SUM(C3...C6)

C17:/F$@SUM((C9-C13))

PAPA's PIZZA PARLOR

You need: VisiCalc Diskette
                     MECC Template Diskette

Papa's Pizza Parlor keeps its inventory on VisiCalc. You are in charge of keeping stock on hand and therefore must enter data, determine if an item must be reordered and amounts to reorder. It is also important that you know the total value of your inventory.

1. Load VisiCalc.
2. Insert MECC Template Diskette.
3. Load **TEMPLATE NO. 3.VC**
4. Enter the following data for stock on hand:

	cost/unit	on hand	maximum	minimum
Pepperoni	.95	165	250	100
Sausage	1.25	190	200	100
Mozzarella	1.10	115	200	100
Tomato Sauce	.87	18	60	15
Herb Blend	2.10	12	25	10
Mushrooms	.67	110	90	30
Ripe Olives	.98	12	25	10
Onions	.47	112	115	75
Canadian Bacon	1.98	120	125	90
Flour	.49	190	300	150
Shortening	1.42	110	125	50
Salt	.08	11	25	10

5. Go to cell G8.
   Write down the formula from the entry line. $@IF((D8-G8)<F8,1,0)$

   The value for D8 is the amount of pepperoni on hand.

   The value for H8 is the amount of pepperoni which has been used.

   The value for F8 is the point at which pepperoni must be reordered (the minimum amount you can have on hand). If the amount of D8 + H8 is less than F8, a numeral 1 is placed in the cell. This would mean that pepperoni should be reordered.

   Which items need to be reordered:

   none_____   _____

   _____   _____

   _____   _____

6. List the total value of the inventory. $ 1,187.49

7. How does your template find a total value for the amount of each item you have on hand? (see cell J8)

_____ + C8 * (D8-H8) _____

8. If you have a negative value in your amount to reorder column, what does this indicate? ___ overstock inventory _____

Which item has a negative value? __ mushrooms _____

Since you are dealing with perishables, what might you need to do to solve this problem?

___ use more, sell cheaper, buy less _____

9. At the end of Friday you enter the amounts of the various items which have been used that week. First change the date on the template from 1/15/83 to 1/22/83. Enter these amounts:

Pepperoni	78	Herb Blend	5	Canadian Bacon	70
Sausage	40	Mushrooms	20	Flour	152
Mozzarella	92	Ripe Olives	5	Shortening	70
Tomato Sauce	10	Onions	50	Salt	5

Now list which items need to be reordered and the amount to reorder:

Item	Amount	Item	Amount
PEPPERONI	163	ONIONS	53
MOZZARELLA	177	CANADIAN BACON	75
TOMATO SAUCE	52	FLOUR	200
HERB BLEND	18	SHORTENING	85
RIPE OLIVES	18	SALT	19

10. List the total value of the inventory. $ 618.69

11. Go to cell I8.

Note the formula in the cell: +((E8-(D8-H8))

Describe the value each cell in the formula contains:

E8 __MAX 250__   D8 __165 IN STOCK__   H8 __78 AMT. USED__

Describe what happens when this formula operates.

___ ON HAND — AMT. USED SUBTRACTED FROM ___

___ MAXIMUM = AMT. NEEDED TO FULFILL MAXIMUM ___

```
        PAPA'S PIZZA PLACE

    INVENTORY STOCK STATUS

        AS OF 01/15/83


                                       AMOUNT  1 =      AMOUNT    ITEM

DESC.        UNIT   COST/UNIT  ON HAND  MAXIMUM  MINIMUM   USED  REORDER   REORDER   VALUE
-----------------------------------------------------------------------------------------
                                                         → H8      → I8      → J8
PEPPERONI    LBS                                            0         0       0.00

SAUSAGE      LBS                                            0         0       0.00

MOZZARELLA   LBS                                            0         0       0.00

TOM.SAUCE    QTS                                            0         0       0.00

HERB BLND    LBS                                            0         0       0.00

MUSHROOMS    LBS                                            0         0       0.00

R. OLIVES    QTS                                            0         0       0.00

ONIONS       LBS                                            0         0       0.00

CAN.BACON    LBS                                            0         0       0.00

FLOUR        LBS                                            0         0       0.00

SHORT.       LBS                                            0         0       0.00

SALT         LBS                                            0         0       0.00
                                                                            -----

                                                                        → J23
                                                    TOT.VALUE              0
```

CELL FORMULAS

H8:/FI@IF((D8-G8)<F8,1,0)

I8:/FI+((E8-(D8-H8))

J8:/F$+C8*(D8-H8)

J23:@SUM(J8...J19)

PERSONAL BUDGET

1. Load VisiCalc.   Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 4.VC

3. This is a personal budget spreadsheet.   Move the cursor so that you scroll across all the columns.   There are expense categories (columns E through M), a total income column (column B), a total expense column (column C), and a column that calculates the difference between total income and total expenses (column D).

   Move the cursor so that you scroll down all the rows.   There is one row for each month of the year as well as a TOTALS row which will total each column.   This spreadsheet will be completed for Julie, a high school junior working part time and living at home.   She is paying some board and room.

4. Begin completing this spreadsheet by entering Julie's estimated income for each month of the year as follows:

January through May	=	200.00 per month
June, July, August	=	300.00 per month
September through December	=	225.00 per month

5. Julie must pay $25 per month during the school year and $30 per month in June, July, and August for room and board.   Enter these amounts under housing.   How much is her yearly housing cost? $ __315.00__

   As you enter these amounts, notice that VisiCalc automatically calculates the total expense and the difference between income and expense.

6. Julie is trying to save for a vacation trip with her friends in July.   She will need $120.00 for the trip.   Therefore, she is hoping to save $20.00 each month from January through June.

   Enter this estimated savings for those months.

7. Julie usually spends approximately $60.00 on Christmas gifts.   She will begin saving for this in July and continue through December saving $10.00 per month.

   Enter this estimated savings.   How much is Julie planning to save this year? $ __180.00__

8. School expenses are usually 20.00 per month (except June, July, and August).   However, she will be having her senior pictures taken in August.   She will have to pay $80.00 for this.   Her parents will pay the rest.

   Enter $20.00 for school expenses during the school year and $80.00 for August.

   Her total school expenses for the year are $ __260.00__ .

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9. Julie must pay a portion of the car insurance as well as buying her own gas each month. This amounts ot 40.00 per school month. Since she drives more in the summer, her gas bill is $50.00 during June, July, and August.

Enter these amounts in the transportation column.

Her transportation expenses for the year are $ 510.00 .

10. Julie contributes approximately $10 per month to her church and other organizations. However, in August she will contribute an additional $10 to United Way.

Enter these amounts in the Contribution column. Julie's estimated contributions for the year equal $ 130.00 .

11. Julie must purchase her own personal care items such as cosmetics, hair cuts, and shampoo. This costs approximately $30 per month all year long.

Enter these estimates. How much does Julie expect to spend this year on personal care? $ 360.00

12. Clothing, food, and recreation costs vary greatly from month to month. Before Julie estimates these expenses, she would like to know how much income she has left. Fill in the following chart. It will let Julie see approximately how much she can budget in each category.

	Total Income	Total Expenses	Difference
January	200	145	55
February	200	145	55
March	200	145	55
April	200	145	55
May	200	145	55
June	300	140	160
July	300	130	170
August	300	220	80
September	225	135	90
October	225	135	90
November	225	135	90
December	225	135	90

13. Julie estimates that her food (away from home) will cost $20.00 per school month and $40.00 per summer month (June, July, and August).

Enter this in the food column. Total yearly food costs are $ 300 .

14. Julie has only two categories left to estimate. These are flexible and she needs to know how much money she has left. Fill in the following chart.

Difference

January	$ 35
February	$ 35
March	$ 35
April	$ 35
May	$ 35
June	$ 120
July	$ 130
August	$ 40
September	$ 70
October	$ 70
November	$ 70
December	$ 70

15. Let's look at Julie's clothing budget. She would like to buy new clothes for her vacation and for school in September.
Is this possible? **YES**

How? **BUDGET HER REMAINING MONEY.**

16. Enter the following amounts for Julie's clothing budget:

January - May	=	$20.00/month
June	=	$100.00
July	=	$80.00
August	=	$20.00
Sept. - Dec.	=	$50.00/month.

Total clothing budget $ **500.00**

17. Julie will probably spend the rest of her money on recreation each month. Enter these amounts on the spreadsheet.

Fill in the following chart:

Month	Recreation
January - May	$ 15
June	$ 20
July	$ 50
Aug. - Dec.	$ 20

18. Julie's budget should now be "in balance." That means that her income equals her expenses. If she would be laid off or cut back at work, what will she have to do to her expenses?

REDUCE EXPENSES

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19. If she decides to buy a new $70.00 ski outfit in November, list two ways she could come up with this amount.

1. USE $50.00 CLOTHES BUDGET + RECREATION FUNDS ($20.00)

2. PUT ON LAY-AWAY PLAN

20. If you have access to a printer, print out a copy of Julie's budget and attach it to this worksheet.

YEARLY BUDGET

MONTH	TOT INC	TOT EXP	DIFF	HOUSE	CLOTHING	TRANS	FOOD	SCHOOL	RECREAT	PER CARE	SAVING	CONTRIB
JANUARY		C5 0	D5 0									
FEBRUARY		C6 0	0									
MARCH		0	0									
APRIL		0	0									
MAY		0	0									
JUNE		0	0									
JULY		0	0									
AUGUST		0	0									
SEPTEMBER		0	0									
OCTOBER		0	0									
NOVEMBER		0	0									
DECEMBER		0	0									
TOTALS	B18 0	C18 0	0	0	0	0	0	0	0	0	0	0

CELL FORMULAS

B18:@SUM(B5...B16)

C5:@SUM(E5...M5)

C6:@SUM(E6...M6)

C18:@SUM(C5...C16)

D5:+B5-C5

COMPOUND INTEREST COMPARISON

1. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

You have $100 to deposit in a savings account. You have learned that there are different types of accounts that accrue interest at varying rates. Enter the following data related to the savings accounts you have checked. See how much interest will be earned if the money is invested for different lengths of time at varying interest rates.

Principal	Interest Rate	Years
100.00	5.250	.25
100.00	5.250	.50
100.00	5.250	.75
100.00	5.250	1.00
100.00	5.250	5.00
100.00	5.250	10.00
100.00	6.000	5.00
100.00	6.500	5.00
100.00	7.250	5.00
100.00	11.500	5.00
100.00	12.364	5.00
100.00	12.500	5.00

Answer the following questions based on the table you have generated.

NOTE: This template is currently set up for global manual recalculation. (See Lesson 8.)

Interest Rate	Years	Interest Earned if Compounded: Daily	Quarterly	Annually
5.25	1	$ 105.39	$105.38	$ 105.36
5.25	5	130.02	129.81	129.19
5.25	10	169.03	167.96	164.93
7.25	5	143.69	143.37	142.44
12.50	5	186.82	186.10	184.02

Which will earn more interest?

    1. $100 at 5.25% for 10 years _____
    2. $100 at 12.5% for 5 years ___X___

What is the difference if compounded daily? $77.79

2. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

Check to see what the ending value of a $1000 investment will be if invested at a constant interest rate, but for a varying number of years. Enter the following data relative to the investment to determine what the ending values will be.

Principal	Interest Rate	Years
1000.00	10	1
1000.00	10	2
1000.00	10	3
1000.00	10	4
1000.00	10	5
1000.00	10	6
1000.00	10	7
1000.00	10	8
1000.00	10	9
1000.00	10	10
1000.00	10	20
1000.00	10	30

Answer the following questions based on the table you have generated.

NOTE: This template is currently set up for global manual recalculation. (See Lesson 8.)

Ending value of $1000 invested at 10% for:

Years	Daily	Compounded: Quarterly	Annually
1	$ 1105.17	$ 1105.03	$ 1104.62
5	1648.66	1643.62	1628.89
10	2717.91	2435.19	2593.74
30	20060.79	18044.24	13785.85

How much more interest is earned over a thirty year period if interest is compounded daily rather than quarterly? $ 2,016.55

Quarterly rather than annually? 4,258.39

Daily rather than annually? 6,274.94

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3. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 5.VC

Enter the following data related to the investment of $100 at varying rates of interest for varying numbers of years.

Principal	Interest Rate	Years
100.00	5.25	5
100.00	6.50	5
100.00	7.00	5
100.00	7.50	5
100.00	9.00	5
100.00	10.50	5
100.00	11.75	5
100.00	13.50	5
100.00	15.75	5
100.00	16.00	5
100.00	17.00	5
100.00	18.00	5

Answer the following questions based on the table you have generated.

NOTE: This template is currently set up for global manual recalculation. (See Lesson 8.)

How great a difference is there in interest earnings on $100 invested for five years for each example listed:

Interest Earned if Compounded:

Interest Rate	Daily	Monthly	Quarterly	Semi-Annually	Annually	Difference
5.25	$ 130.02	129.95	129.81	129.60	129.19	.83
7.50	145.50	145.39	145.16	144.83	144.18	1.32
11.75	179.94	179.73	179.29	178.65	177.41	2.53
18.00	245.94	245.50	244.59	243.25	240.66	5.28

COMPOUND INTEREST COMPARISON

PRINCIPAL	INT RATE	YEARS	COMPOUND DAILY	COMPOUND MONTHLY	COMPOUND QRTLY	COMPOUND SEMI-ANN	COMPOUND ANNUALLY
			→ D6	→ E6	→ F6		
NA			NA	NA	NA	NA	NA
			→ D7				
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
NA			NA	NA	NA	NA	NA
			→ D17				
NA			NA	NA	NA	NA	NA

CELL FORMULAS

D6:/F$+(A6*((1+.01*C6)/365))∧(B6*365)))

D7:/F$+(A7*((1+((.01*C7)/365))∧(B7*365)))

D17:/F$+(A17*((1+((.01*C17)/365))∧(B17*365)))

E6:/F$+(A6*((1+((.01*C6)/12))∧(B6*12)))

F6:/F$+A6*((1+((.01*C6)/4))∧(B6*4)))

125

TRAVEL EXPENSE REPORT

1. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 6.VC

Enter the following expense report data for business trips your boss made last month.

#4
EXPENSE REPORT

Cost per mile = 21¢

DATE	FROM	TO	MILEAGE	COST	BREAK	LUNCH	EVENING	HOTEL	OTHER	BUS/TAX
8	St. Paul	Minneapolis	22	4.62	0.00	0.00	13.00	0.00	0.00	2.25
10	St. Paul	Bloomington	23	4.83	0.00	0.00	0.00	0.00	0.00	1.75
11	St. Paul	Minneapolis	20	4.20	0.00	0.00	0.00	0.00	0.00	1.50
16	St. Paul	New Hope	58	12.18	0.00	0.00	0.00	0.00	0.00	0.00
18	St. Paul	Chisago	63	13.23	0.00	5.50	9.78	0.00	0.00	0.00
20	St. Paul	Stillwater	47	9.87	0.00	5.60	0.00	0.00	0.00	0.00
21	St. Paul	Brooklyn Park	59	12.39	0.00	4.26	0.00	0.00	0.00	0.00
24	St. Paul	St. Cloud	156	32.76	4.25	6.54	9.95	0.00	0.00	0.00
25	St. Paul	Hopkins	48	10.08	0.00	3.88	0.00	0.00	0.00	0.00
27	St. Paul	Duluth	183	38.43	3.89	5.35	12.00	32.39	0.00	0.00
28	Duluth	St. Paul	167	35.07	4.58	4.99	0.00	0.00	0.00	0.00
29	St. Paul	Eden Prairie	59	12.39	0.00	4.15	0.00	0.00	0.00	0.00
30	St. Paul	Willmar	127	26.67	4.58	5.42	9.67	0.00	0.00	0.00
31	Willmar	St. Paul	135	28.35	0.00	4.67	0.00	0.00	0.00	0.00

Answer the following questions based on the expense report you created.

Total miles driven ___1,167___

Cost of mileage $ ___245.07___

Lunch expense ___50.36___

Hotel expense ___32.39___

Total expense for the 11th day
of the month ___5.70___

TOTAL EXPENSE FOR MONTH ___405.02___

2. Load VisiCalc. Remove Diskette.

Using the MECC Template Diskette, load TEMPLATE NO. 6.VC

Enter the following expense report data for business trips your boss made last month.

EXPENSE REPORT

Cost per mile = 22¢

DATE	FROM	TO	MILEAGE	COST	BREAK	LUNCH	EVENING	HOTEL	OTHER	BUS/TAX
3	St. Paul	Hutchinson	170	37.40	0.00	5.50	9.76	0.00	0.00	0.00
5	St. Paul	Belle Plaine	125	27.50	0.00	4.98	0.00	0.00	0.00	0.00
6	St. Paul	Minnetonka	52	11.44	0.00	3.75	0.00	0.00	0.00	0.00
7	St. Paul	Bemidji	237	52.14	4.45	5.97	10.45	0.00	0.50	0.00
8	Bemidji	St. Paul	245	53.90	4.70	5.85	9.67	0.00	0.00	0.00
10	St. Paul	Mounds View	33	7.26	0.00	3.85	0.00	0.00	0.00	0.00
12	St. Paul	Moorhead	249	54.78	2.95	6.40	10.98	38.52	1.40	0.00
13	Moorhead	Vicinity	20	4.40	4.90	6.65	11.70	38.52	0.00	0.00
14	Moorhead	St. Paul	247	54.34	5.25	6.50	0.00	0.00	0.00	0.00
18	St. Paul	Minneapolis	14	3.08	0.00	0.00	10.25	0.00	0.00	2.50
24	St. Paul	Minneapolis	18	3.96	5.50	5.70	12.40	0.00	0.00	3.75
25	St. Paul	Minneapolis	22	4.84	5.37	6.65	13.00	0.00	0.00	4.00
26	St. Paul	New Brighton	27	5.94	0.00	0.00	0.00	0.00	0.00	0.00
30	St. Paul	White Bear Lake	31	6.82	0.00	3.55	0.00	0.00	0.00	0.00

Answer the following questions based on the expense report you created.

What city did your boss travel to on Day 7?   BEMIDJI

Cost of mileage $ 52.14

Meal expense   20.87

Other expense   .50

Total living expense for 7th day of the month   73.51

TOTAL EXPENSE FOR MONTH   603.67

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EXPENSE REPORT FOR (MONTH)

DATE SUBMITTED ( ) BY ( )

COST/MILE 0.00

DATE	FROM	TO	MILEAGE	COST	BKFST	LUNCH	DINNER	HOTEL	OTHER	BUS/TAX	TOTAL
				➝ E8							➝ L8
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				0.00							0.00
				➝ E21							➝ L21
				0.00							0.00
			➝ D23	➝ E23	➝ F23						
			0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
											➝ L26
								LIVING EXP			0.00
								MILAGE COST			0.00
											➝ L28
								TOTAL EXP			0.00

CELL FORMULAS

D23:/FI@SUM(D8...D21)	L8:/F$@SUM(F8...K8)
E8:/F$+(D8*B5)	L21:/F$@SUM(F21...K21)
E21:/F$+(D21*B5)	L26:/F$@SUM(L8...L21)
E23:/F$@SUM(E8...E21)	L28:/F$@SUM(L26...L27)
F23:/F$@SUM(F8...F21)	

SERVICE BUSINESS
INCOME STATEMENTS
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 8.VC

3. This spreadsheet will allow you to compile an income statement. You will be able to test the effect of increases in sales and expenses on the net income.

   Enter the following amounts in the appropriate cells:

Sales	=	3000.00
Vending Machines Income	=	900.00
Electricity Expenses	=	800.00
Miscellaneous Expenses	=	175.00
Rent Expenses	=	1500.00

4. Fill in the following amounts:

Total Sales	=	$ 3900.00
Total Expenses	=	$ 2475.00
Net Income	=	$ 1425.00

5. If sales increases to 4000.00, what is the new net income?

   $ 2425.00

6. Increase electricity expense to $1000.00. What is the new net income?

   $ 2225.00

7. Decrease sales to $1775.00. What happens to net income?

   Ø

8. Change vending income to -0-. What happens to net income?

   $ 900.00

SERVICE BUSINESS
INCOME STATEMENTS
PROBLEM #2

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 8.VC

3. Enter the following amounts in the appropriate cells:

Sales	=	10957.12
Vending Machine Income	=	1568.43
Electricity Expenses	=	3476.51
Miscellaneous Expenses	=	1784.92
Rent Expenses	=	5850.00

4. Fill in the following amounts:

Total Sales	=	$ 12,525.55
Total Expenses	=	$ 11 111 .43
Net Income (- Loss)	=	$ 1414 . 12

5. Increase the three expenses so that the net income (- Loss) is 0.

List the expense amounts:

Electricity Expenses	=	$ 3590.63
Miscellaneous Expenses	=	$ 2084.92
Rent Expenses	=	$ 6850.00
Total Expenses	=	$ 12,525.55

STUDENT ANSWERS WILL VARY.

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```
            SMITH COMPANY

         INCOME STATEMENT


REVENUE:

        SALES        0.00

        VEND. INC    0.00

                  ----------   � D8
        TOT.SALES         0.00

EXPENSES:

        ELEC.EXP.    0.00

        MISC.EXP.    0.00

        RENT EXP.    0.00

                  ----------   ➔ D14
        TOT. EXP.         0.00

                  ----------   ➔ D16
NET INC. (-LOSS)       0.00
```

CELL FORMULAS

D8:/F$@SUM(C5...C6)

D14:/F$@SUM(C10...C12)

D16:/F$+D8-D14

MERCHANDISING BUSINESS
INCOME STATEMENT
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE No. 14.VC

3. This spreadsheet will allow you to compile an income statement for a merchandising business. You will be able to test the effect of increases in sales and changes in beginning and ending inventory on net income.

    Enter the following amounts in the appropriate cells (see sample template on the next page):

LABEL		AMOUNT	ENTER IN CELL
Sales	=	8000.00	F8
Sales Returned & Allowances	=	200.00	E9
Sales Discount	=	50.00	E10
Beginning Inventory	=	10000.00	G15
Purchases	=	5000.00	F16
Purchases Returned & Allowances	=	300.00	E17
Purchases Discount	=	100.00	E18
Ending Inventory	=	9000.00	G21
Salary Expenses	=	500.00	G28
Store Supplier Expenses	=	25.00	G29
Depreciation Expenses	=	100.00	G30
Advance Expenses	=	30.00	G31
Insurance Expenses	=	75.00	G32
Miscellaneous	=	45.00	G33
Rent Income	=	100.00	F40
Gain on Fixed Assets	=	150.00	F41
Loss on Fixed Assets	=	150.00	F46
Cash Short & Over	=	40.00	F47

4. Fill in the following amounts:

CELL	LABEL	AMOUNT
H12	Net Sales	$ 7750.00
G20	Net Purchases	$ 4600.00
H23	Cost of Goods Sold	$ 5600.00
H25	Gross Profit	$ 2150.00
H35	Total Expenses	$ 775.00
H37	Net Income from Operation	$ 1375.00
H53	Net Income	$ 1315.00

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5.   Increase sales to 12000. What is the new net income?

$ __5,315.00__

6.   Decrease ending inventory to 6000. What is new the net income?

$ __2,315.00__

7.   Increase beginning inventory to 15000. What is new the net income?

$ __- 2,685.00__

MERCHANDISING BUSINESS
INCOME STATEMENT
PROBLEM #2

1.   Load VisiCalc. Remove Diskette.

2.   Using the MECC Template, load TEMPLATE NO. 14.VC

3.   This spreadsheet will allow you to compile an income statement for a merchandising business. You will be able to test the effect of changes in sales, purchases, and inventory on net income.

Enter the following amounts in the appropriate cells (see sample template on the preceding page):

LABEL		AMOUNT	ENTER IN CELL
Sales	=	20000.00	F8
Sales Returned and Allowance	=	0.00	E9
Sales Discount	=	0.00	E10
Beginning Income	=	10000.00	G15
Purchases	=	15000.00	F16
Purchases Returned and Allowance	=	0.00	E17
Purchases Discount	=	0.00	E18
Ending Inventory	=	9000.00	G21
Salary Expense	=	1000.00	G28
Store Supplies Expenses	=	1000.00	G29
Depreciation Expenses	=	1500.00	G30
Advance Expenses	=	300.00	G31
Insurance Expenses	=	200.00	G32
Miscellaneous Expenses	=	500.00	G33
Rent Income	=	0.00	F40
Gain or Fixed Assets	=	100.00	F41
Loss or Fixed Assets	=	300.00	F46
Cash Short and Over	=	50.00	F47

4.   Fill in the following amounts:

CELL	LABEL	AMOUNT
H12	Net Sales	$ 20,000.00
G20	Net Purchases	$ 15,000.00
H23	Cost of Goods Sold	$ 16,000.00
H25	Gross Profit	$ 4,000.00
H35	Total Expenses	$ 4,500.00
H37	New Income From Operation	$ - 500.00
H53	Net Income	$ - 250.00

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5. Increase sales to 25000. What is the new net income?

    $ __4,750.00__

6. Increase purchases to 22000. What is the new net income?

    $ __- 2,250.00__

7. Increase ending inventory to 12000. What is the new net increase?

    $ __750.00__

```
              NAME OF BUSINESS


              INCOME STATEMENT

              PERIOD ENDING 4/82


------------------------------------------------------------------
INCOME
         SALES                        3000.00

         SALES RET & ALLOW.      200.00  ➔ F10
         SALES DISCOUNT           50.00   250.00

                                         ➔ H12
         NET SALES                         2750.00


COST OF GOODS SOLD
         BEGINNING INVENTORY            10000.00
         PURCHASES                 5000.00
         PURCH. RET. & ALLOW.      300.00  ➔ F18
         PURCH. DISC.              100.00   400.00

                                         ➔ G20
         NET PURCHASES                    4600.00
         ENDING INVENTORY                 9000.00

                                         ➔ H23
         COST OF GOODS SOLD               5600.00

                                         ➔ H25
GROSS PROFIT ON SALES                     2150.00


EXPENSES
         SALARIES EXPENSE          500.00
         STORE SUPPLIES EXPENSES    25.00
         DEPR. EXPENSE             100.00
         ADV. EXPENSE               30.00
         INSURANCE EXPENSE          75.00
         MISC. EXPENSE              45.00

                                         ➔ H35
TOTAL EXPENSES                             775.00

                                         ➔ H37
NET INCOME FROM OPERATIONS                1375.00


OTHER INCOME
         RENT INCOME               100.00
         GAIN ON FIXED ASSETS      150.00

                                         ➔ G43
         TOTAL OTHER INCOME               250.00


OTHER EXPENSES
         LOSS ON FIXED ASSETS      150.00
         CASH SHORT AND OVER        40.00

                                         ➔ G49
         TOTAL OTHER EXPENSES             190.00

                                         ➔ H51
NET ADDITION                                60.00

                                         ➔ H53
NET INCOME                                1315.00
```

CELL FORMULAS

F10:/F$@SUM(E9+E10)

F18:/F$@SUM(E17+E18)

G20:/F$@SUM(F16-F18)

G43:/F$@SUM(F40+F41)

G49:/F$@SUM(F46+F47)

H12:/F$@SUM(F8-F10)

H23:/F$@SUM((G15+G20)-G21)

H25:/F$@SUM(H12-H23)

H35:/F$@SUM(G28...G33)

H37:/F$@SUM(H25-H35)

H51:/F$@SUM(G43-G49)

H53:/F$@SUM(H37-H50)

TRIAL BALANCE
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 9.VC

3. This spreadsheet will allow you to do a trial balance to determine if debits equal credits. Enter the following amounts in the appropriate cells:

PROBLEM #1

Cash	5000.00
Accounts Receivable	2000.00
Inventory	10000.00
Furniture	3000.00
Trucks	8000.00
Office Equipment	1500.00
Accounts Payable	8000.00
Smith, Capital	16100.00
Sales	7000.00
Electrical Expense	500.00
Miscellaneous Expense	250.00
Rent Expense	850.00

Fill in the following totals:

Total Debits   = $ _31,100.00_

Total Credits   = $ _31,100.00_

Difference   = $ _-0-_

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM #2

Cash	1250.00
Accounts Receivable	789.00
Inventory	1500.00
Furniture	-0-
Trucks	-0-
Office Equipment	525.00
Accounts Payable	421.00
Smith, Capital	3000.00
Sales	1150.00
Electricity Expenses	120.00
Miscellaneous Expenses	37.00
Rent Expenses	350.00

Fill in the following totals:

Total Debits   = $ _4,571.00_

Total Credits   = $ _4,571.00_

Difference   = $ _-0-_

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM #3

Cash	15776.15
Accounts Receivable	7895.07
Inventory	25550.78
Furniture	19764.59
Trucks	15376.95
Office Equipment	5783.46
Accounts Payable	24793.87
Smith, Capital	36613.78
Sales	30547.68
Electricity Expenses	595.47
Miscellaneous Expenses	212.86
Rent Expenses	1000.00

Fill in the following totals:

Total Debits   = $ _9,955.00_

Total Credits   = $ _91,955.00_

Difference   = $ _- 0 -_

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM #4

Cash	10765.42
Accounts Receivable	2987.49
Inventory	20468.33
Furniture	1547.00
Trucks	9500.00
Office Equipment	3050.77
Accounts Payable	3403.84
Smith, Capital	23000.00
Sales	20000.00
Electricity Expenses	347.19
Miscellaneous Expenses	89.98
Rent Expenses	647.66

Fill in the following totals:

Total Debits   = $ 49,403.84

Total Credits   = $ 46,403.84

Difference   = $ 3,000.00

If you have access to a printer, print out the trial balance and attach it to this page.

TRIAL BALANCE
PROBLEM # 5

Cash	3554.78
Accounts Receivable	2005.01
Inventory	4796.74
Furniture	1769.00
Trucks	4500.00
Office Equipment	1378.66
Accounts Payable	587.56
Smith, Capital	10892.47
Sales	8571.80
Electricity Expenses	350.00
Miscellaneous Expenses	197.64
Rent Expenses	500.00

Fill in the following totals:

Total Debits   = $ _19,051.83_

Total Credits   = $ _20,051.83_

Difference   = $– _1,000.00_

If you have access to a printer, print out the trial balance and attach it to this page.

```
                    SMITH COMPANY

                    TRIAL BALANCE


                                   DEBIT    CREDIT

         CASH

         ACCTS.REC

         INVENTORY

         FURNITURE

         TRUCKS

         OFF.EQUIP

         ACCTS.PAY

         SMITH,CAP

         SALES

         ELEC.EXP.

         MISC.EXP.

         RENT EXP.
                                 ------------------
                                  → D18     → E18
                                    0.00       0.00
                          → C19
                   DIFF IS    0.00
```

CELL FORMULAS

```
C19:/F$+D18-E18
D18:/F$@SUM(D5...D16)
E18:/F$@SUM(E5...E16)
```

COMPARATIVE COMMON SIZE BALANCE SHEET

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 10.VC

3. The spreadsheet on the screen is a detailed balance sheet. Scroll down the rows watching to see how the assets are divided into current and fixed. Notice also that liabilities are divided into current and long term. Finally, the equity section gives total equity as well as total liabilities plus equity.

4. Scroll across the columns. Notice that there are 2 columns that give us a comparative balance sheet for 1981 and 1982. This means that we are able to look at the balance sheets for 2 years at one time. This allows us to compare 1982 with 1981 for each item.

   As you scroll further, notice the 2 columns that give us a common size balance sheet for 1981 and 1982. A common size statement changes dollar amounts to percentages so that comparisons are easier. You will be able to see this once you enter the amounts on the spreadsheet.

5. Enter the following amounts in the appropriate cells:

	Comparative	
	1981	1982
Current Assets		
Cash	10000.00	2000.00
Accounts Receivable	2000.00	1000.00
Allow Bad Debts	200.00	200.00
Inventory	15000.00	5000.00
Prepaid Expenses	1500.00	2000.00
Fixed Assets		
Building	35000.00	45000.00
Accumulative Depreciation	5000.00	9000.00
Land	20000.00	20000.00
Equipment	10000.00	13000.00
Accumulative Depreciation	1000.00	1500.00
Liabilities		
Accounts Payable	5000.00	2000.00
Loans Payable	8000.00	10000.00
Notes Payable	10000.00	15000.00
Long-term Liabilities		
Bonds Payable	15000.00	20000.00
Mortgage Payable	17000.00	16000.00
Equity		
S. Hanson, Capital	52300.00	34300.00
S. Hanson, Drawing	20000.00	20000.00

6. Fill in the blanks:

	1981	1982
Total Assets	$ 87,300	$ 77,300
Total Liabilities	$ 55,000	$ 63,000
Total Equity	$ 32,300	$ 14,300
Total Liabilities & Equity	$ 87,300	$ 77,300

7. Look at the columns labeled "common size." The numbers in the cells represent percentages. Notice that all the 1981 asset percentages are added together and total 100% for Total Assets. This means that each asset cell represents a percentage of the total assets in 1981. The same is true for 1982. Each asset cell represents a percentage of the total assets in 1982.

8. Complete the following statements:

   A.   In 1981 Cash was ___11.45___ % of total assets.
   B.   In 1982 Cash was ___2.59___ % of total assets.
   C.   Cash increased/decreased in relation to total assets.
            circle one

   D.   In 1981 Current Assets were ___32.42___ % of total assets.
   E.   In 1982 Current Assets were ___12.68___ % of total assets.
   F.   Current Assets increased/decreased in relation to total assets.
            circle one

   G.   In 1981 Building was ___40.09___ % of total assets.
   H.   In 1982 Building was ___58.21___ % of total assets.
   I.   Building increased/decreased in relation to total assets.
            circle one

   J.   In 1981 Fixed Assets were ___67.58___ % of total assets.
   K.   In 1982 Fixed Assets were ___87.32___ % of total assets.
   L.   Fixed Assets increased/decreased in relation to total assets.
            circle one

9. Scroll down through the common size liabilities. Again, the numbers in the cells represent percentages. This time they are percentages of Total Liabilities and Equity. You can see this by looking at the "Total Liab. & Equity" row. The columns add up to 100%.

10. Complete the following statements:

   A.   In 1981 Accounts Payable was _5.73_ % of total liabilities & equity.
   B.   In 1982 Accounts Payable was _2.59_ % of total liabilities & equity.
   C.   Accounts Payable increased/decreased in relation to total liabilities & equity.
                                    circle one

   D.   In 1981 current liabilities were _26.35_ % of total liabilities & equity.
   E.   In 1982 current liabilities were _34.93_ % of total liabilities & equity.
   F.   Current liabilities increased/decreased in relation to total liabilities & equity.
                                    circle one

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G. In 1981 Long-term liabilities were _36.66_ % of total liabilities & equity.

H. In 1982 Long-term liabilities were _46.57_ % of total liabilities & equity.

I. Long-term liabilities (increased) decreased in relation to total liabilities & equity.   circle one

J. In 1981 total equity was _37.0_ % of total liabilities & equity.

K. In 1982 total equity was _18.5_ % of total liabilities & equity.

L. Total equity increased (decreased) in relation to total liabilities & equity.   circle one

11. Financial analysts use this kind of statement to determine trends in the financial position of a company. Look through the following numbers and circle the trend for each:

Account	Trend
Accounts Receivable	Increase / (Decrease)
Allow for Bad Debts	(Increase) / Decrease
Inventory	Increase / (Decrease)
Prepaid Expenses	(Increase) / Decrease
Land	(Increase) / Decrease
Equipment	(Increase) / Decrease
Loans Payable	(Increase) / Decrease
Notes Payable	(Increase) / Decrease
Bonds Payable	(Increase) / Decrease
Mortgage Payable	(Increase) / Decrease
S. Hanson, Capital	Increase / (Decrease)
S. Hanson, Drawing	(Increase) / Decrease

```
            COMPARATIVE COMMON SIZE
               BALANCE SHEET


                      COMPARATIVE
                    1981      1982
         ASSETS


    CURRENT ASSETS:

      CASH           0.00      0.00

      ACCTS. REC.    0.00      0.00

        ALLOW BAD DEBT  0.00   0.00

      INVENTORY      0.00      0.00

      PREPAID EXPENSES 0.00    0.00
                   ----------------
                  → C15   → D15
    TOTAL CUR.ASSETS   0.00    0.00
                   ----------------


    FIXED ASSETS:

      BUILDING       0.00      0.00

        ACCUM DEPREC.  0.00    0.00

      LAND           0.00      0.00

      EQUIPMENT      0.00      0.00

        ACCUM DEPREC.  0.00    0.00
                   ----------------
                  → C25   → D25
    TOTAL FIX. ASSET   0.00    0.00
                   ----------------
                  → C27   → D27
    TOTAL ASSETS:      0.00    0.00
                   ================


           LIABILITIES


    CUR. LIABILITIES:
      ACCTS. PAYABLE   0.00    0.00
      ACCTS. PAYABLE   0.00    0.00
      LOANS PAYABLE    0.00    0.00
      NOTES PAYABLE    0.00    0.00
                   ----------------
                  → C39   → D39
    TOTAL CUR.LIAB.    0.00    0.00


    LONG-TERM LIAB.:
      BONDS PAYABLE    0.00    0.00
      MORTGAGE PAYABLE 0.00    0.00
                   ----------------
                  → C46   → D46
    TOT.LNG-TRM LIAB   0.00    0.00
                   ----------------
                  → C48   → D48
    TOTAL LIABILITIES: 0.00    0.00
                   ----------------


             EQUITY


    SHARON HANSON,CAP.  0.00   0.00

      S. HANSON, DRAW.  0.00   0.00
                   ----------------
                  → C58   → D58
    TOTAL EQUITY:      0.00    0.00
                   ----------------
                  → C60   → D60
    TOT. LIAB & EQUITY 0.00    0.00
                   ================
```

CELL FORMULAS

C15:/F$+C9+C10-C11+C12+C13

C25:/F$+C19-C20+C21+C22-C23

C27:/F$+C15+C25

C39:/F$@SUM(C35...C37)

C46:/F$@SUM(C43...C44)

C48:/F$+C39+C46

C58:/F$+C55-C56

C60:/F$+C48+C58

D15:/F$+D9+D10-D11+D12+D13

D25:/F$+D19-D20+D21+D22-D23

D27:/F$+D15+D25

D39:/F$@SUM(D35...D37)

D46:/F$@SUM(D43...D44)

D48:/F$+D39+D46

D58:/F$+D55-D56

D60:/F$+D48+D58

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COMPARATIVE INCOME STATEMENT   Name_____

1. Load VisiCalc. Remove Diskette.
2. Using the MECC Template Diskette, load TEMPLATE NO. 7.VC

3. On the screen is the spreadsheet for a Comparative Income Statement. You are looking at more than one income statement in comparison to another. The advantage of this is that you can compare what has happened to revenues and expenses from one year to the next. This makes it easier to see trends and to make predictions.

   Scroll down the rows so that you are familiar with the items necessary to complete the comparative income statement.

4. Enter the following amounts in the appropriate cells:

	1981	1982
Sales	17000.00	18700.00
Sales Returned & Allowances	1000.00	1500.00
Beginning Inventory	35000.00	39000.00
Purchases	10000.00	0.00
Purchases Returned & Allowances	1000.00	0.00
Ending Inventory	39000.00	35000.00
Rent Expense	2500.00	3000.00
Salaries Expense	5000.00	6000.00
Utilities Expense	1000.00	1000.00

5. Enter the net income for 1981 $ _2500.00_
   Enter the net income for 1982 $ _3200.00_

6. State whether the amount increased or decreased from 1981 to 1982 and give the amount of the change.

	Kind of change	Amount
Sales	INCREASE	$ 1700.00
Net Sales	INCREASE	1200.00
Cost of Merchandise Sold	DECREASE	1000.00
Gross Profit	INCREASE	2200.00
Total Expenses	INCREASE	1500.00
Net Income (-Loss)	INCREASE	700.00

7. Notice that sales increased by 10% (from $17000 to $18700). At the same time, sales returned & allowances increased by 50% (from $1000 to $1500). What does this indicate?

   QUALITY OF MERCHANDISE; CUSTOMER SATISFACTION
   IS DECREASING

8. What happened to salaries expense from 1981 to 1982?

   SALARIES ↑ $ 1000.00

   What are some possible reasons for this?

   PROFITS↑, INFLATION, PAY RAISES, MORE EMPLOYEES

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```
          COMPARATIVE INCOME STATEMENT


                         1981      1982


SALES                    0.00      0.00

   LESS RET & ALLOW      0.00      0.00

                        -----------------
                        ➤ C8    ➤ D8
NET SALES                0.00      0.00


LESS CST MERCH SLD

  BEG. INVENTORY         0.00      0.00

  PURCHASES              0.00      0.00

   LESS PURCH R&A        0.00      0.00

                        -----------------
                        ➤ C15
  MERCH AVAIL SALE       0.00      0.00

  LESS END INV           0.00      0.00

                        -----------------
                        ➤ C18
  CST OF MERCH SLD       0.00      0.00

                        -----------------
                        ➤ C20
GROSS PROFIT             0.00      0.00


.EXPENSES:

  RENT EXPENSE           0.00      0.00

  SALARIES EXPENSE       0.00      0.00

  UTIL EXPENSE           0.00      0.00

                        -----------------
                        ➤ C27
  TOTAL EXPENSES         0.00      0.00

                        -----------------
                        ➤ C29
NET INC (-LOSS)          0.00      0.00

                        =================
```

CELL FORMULAS

C8:/F$+C5-C6

C15:/F$+C11+C12-13

C18:/F$+C15-C16

C20:/F$+C8-C18

C27:/F$@SUM(C23...C25)

C29:/F$+C20-C27

D8:/F$+D5-D6

DEPARTMENTAL BUDGET

1. Load VisiCalc. Remove Diskette.
2. Using the MECC Template Diskette, load TEMPLATE NO. 11.VC

3. The spreadsheet on the screen is a budget for a bakery which includes two departments: a bakery department and a cafe. The purpose of this spreadsheet is to make projections about revenues and expenses for each department.

4. Move the cursor to cell C10 which includes the amount of electricity expense for the bakery. Look at the formula stored in this cell. Notice that the value stored in this cell is based on the value of cell C6. In other words, the bakery's electricity expense is a percentage of gross sales for the bakery. As you move the cursor down the column, you will see that advertising, delivery, and salary expense are also figured as a percentage of gross bakery sales. If you move the cursor to the cafe column, you will see that electricity, advertising, delivery, and salary expense for the cafe is figured as a percentage of gross cafe sales.

5. Because these expenses are computed this way, once an amount is put in the gross sales cells, amounts will automatically be entered in the expense cells.

   Enter the following amounts in the appropriate cells.

	Bakery	Cafe
Gross Sales	6000.00	9000.00

6. Record the amounts found in the following cells:

	Bakery	Cafe
Electricity	$ 600.00	$ 450.00
Advertising	$ 300.00	$ 1800.00
Delivery	$ 900.00	$ 225.00
Salaries	$ 3000.00	$ 2250.00

7. Move the cursor to cell C9. This is where the value for the bakery's rent expense is stored. Notice the formula for this cell. It is based on cell C20. C9 is 25% of the value of C20. Look at cell C20. It is the total rent for the building. The bakery uses approximately 25% of the total floor space and, therefore, the bakery is charged 25% of the rent.

   Move the cursor to cell D9. Again, the formula for this cell is based on cell C20. However, the rent expense for the cafe is 75% of the total rent.

   Because C9 and D9 are based on C20, entering a value in C20 will automatically place a value in C9 and D9.

   Enter the total rent as $700.00.

8. Record the amounts found in the following cells:

	·Bakery	Cafe
Rent	$ _175.00_	$ _525.00_

9. Next, determine how any increase in total rent will affect rent expense for each department.

Change the total rent to $900.00.

10. Record the amounts found in the following cells:

	Bakery	Cafe
Rent	$ _225.00_	$ _625.00_

Bakery Rent increased $ _50.00_
Cafe Rent increased $ _150.00_

Why did the cafe rent increase more than the bakery rent?
IT USES MORE FLOOR SPACE, THUS IS CHARGED 3/4 OF TOTAL RENT

11. Change the gross sales for the bakery to $10000.00.
Change the total rent to $1000.00
Notice how the expenses change.

12. Record the amounts found in the following cells:

	Bakery	Cafe
Gross Sales	$ _10,000.00_	$ _9,000.00_
Rent	$ _250.00_	$ _750.00_
Electricity	$ _1,000.00_	$ _450.00_
Advertising	$ _500.00_	$ _1,800.00_
Delivery	$ _1,500.00_	$ _225.00_
Salaries	$ _5,000.00_	$ _2,250.00_
Total Expenses	$ _8,250.00_	$ _5,475.00_
Net Income (– Loss)	$ _1,750.00_	$ _3,525.00_

13. A good use of VisiCalc is to try out different numbers to determine projected net income. Keep trying different amounts for cafe gross sales and watch how the net income (– loss) changes.

14. Make sure total rent = $1000.00 and bakery gross sales = $10000.00. What amount of gross sales does the cafe need in order to make approximately the same amount of net income as the bakery?
$ _5260 - 5265_ ANSWERS MAY VARY WITHIN THIS RANGE.

15. Change the cafe gross sales to $10000.00 and make sure total rent is $1000.00. What amount of gross sales does the bakery need in order to make approximately the same amount of net income as the cafe?
$ _21,200 - 21,300_ ANSWERS MAY VARY WITHIN THIS RANGE.

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16. If gross sales increase by $500.00 for each department, the net income for the bakery and for cafe do not increase the same amount. Why?

THE EXPENSES FOR EACH STORE VARY.

```
          NEW BRIGHTON BAKERY

          DEPARTMENTAL BUDGET


                    BAKERY      CAFE
                 ------------------

GROSS SALES:        0.00       0.00


EXPENSES:
                 ➤ C9      ➤ D9
  RENT              0.00       0.00
                 ➤ C10
  ELECTRICITY       0.00       0.00
                 ➤ C11
  ADVERTISING       0.00       0.00
                 ➤ C12
  DELIVERY          0.00       0.00
                 ➤ C13
  SALARIES          0.00       0.00

                 ------------------
                 ➤ C15     ➤ D15
TOTAL EXPENSES:     0.00       0.00

                 ➤ C17     ➤ D17
NET INCOME (-LOSS)  0.00       0.00



TOTAL RENT :              0
```

CELL FORMULAS

C9:/F$+C20*.25

C10:/F$+C6*.1

C11:/F$+C6*.05

C12:/F$+C6*.15

C13:/F$+C6*.5

C15:/F$+@ SUM(C9...C13)

C17:/F$+C6-C15

D9:/F$+C20*.75

D15:/F$+@ SUM(D9...D13)

D17:/F$+D6-D15

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 12.VC

3. This spreadsheet will allow you to complete a balance sheet and then see the relationship between increases/decreases in assets, liabilities, and equity.

   Enter the following amounts in the appropriate cells:

Cash	=	7500.00
Accounts Receivable	=	1800.00
Inventory	=	15525.00
Furniture	=	3050.00
Trucks	=	9000.00
Office Equipment	=	6575.00
Accounts Payable	=	8350.00
Loans Payable	=	10500.00

4. Fill in the following amounts:

Total Assets	=	$ 43450.00
Total Liabilites	=	$ 18,850.00
Total Equity	=	$ 24,600.00
Total Liability & Equity	=	$ 43,450.00

5. Increase furniture to $4050.00.

6. Record the following amounts:

Total Assets	=	$ 44,450.00
Total Liabilities	=	$ 18,850.00
Total Equity	=	$ 25,600.00
Total Liability & Equity	=	$ 44,450.00

7. Place an X in the correct column:

	Increases	Decreases	No Change
Total Assets	X		
Total Liabilities			X
Total Equity	X		
Total Liability & Equity	X		

8. When a company's assets increase, what happens to the equity accounts?

   EQUITY ACCOUNTS INCREASE

9. Increase loans payable to $15000.00.

10. Record the following amounts:

Total Assets	$ 44,450.00
Total Liabilities	$ 23,350.00
Total Equity	$ 21,100.00
Total Liability & Equity	$ 44,450.00

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11. Place an X in the correct column:

	Increases	Decreases	No Change
Total Assets			X
Total Liabilities	X		
Total Equity		X	
Total Liabilities & Equity			X

12. When a company's liabilities increase, what happens to the equity accounts?

EQUITY ACCOUNTS DECREASE

13. If a company takes out a loan to purchase inventory, both inventory and loans payable should increase.

Increase inventory by $2000.00
Increase loans payable by $2000.00

14. Record the following amounts:

Total Assets $ 46,450.00
Total Liabilities $ 25,350.00
Total Equity $ 21,100.00
Total Liability & Equity $ 46,450.00

15. When a company's assets and liabilities increase equally, what happens to the equity accounts?

'EQUITY' SUFFERS NO CHANGE; HOWEVER, 'LIABILITIES AND EQUITY' FIGURES INCREASE.

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```
            SMITH COMPANY
            BALANCE SHEET


               ASSETS

CASH                  0.00

ACCTS.REC             0.00

INVENTORY             0.00

FURNITURE             0.00

TRUCKS                0.00

OFF.EQUIP             0.00

               ---------  ➔ D12
    TOTAL ASSETS       0.00

               =========



             LIABILITIES

ACCTS.PAY             0.00

LOANS PAY             0.00

               ---------  ➔ D20
    TOTAL LIABILITIES  0.00


               EQUITY      ➔ C23
R. SMITH, CAPITAL    0.00

               ---------  ➔ D25
    TOTAL EQUITY      0.00

               ---------  ➔ D27
  TOT. LIAB. & EQUITY  0.00

               =========
```

CELL FORMULAS

C23:/F$+D12-D20

D12:/F$@SUM(C5...C10)

D20:/F$@SUM(C17...C18)

D25:/F$+C23

D27:/F$+D20+25

BANK RECONCILIATION
PROBLEM #1

1. Load VisiCalc. Remove Diskette.

2. Using the MECC Template Diskette, load TEMPLATE NO. 13.VC

3. Key in the following amounts:

Checkbook Balance	=	3925.56
Service Charge	=	3.50
Bank Balance	=	4857.85
Outstanding Deposit	=	500.00
Outstanding Checks	=	325.86
Outstanding Checks	=	212.59
Outstanding Checks	=	57.34
Outstanding Checks	=	791.15
Outstanding Checks	=	48.85

4. Fill in the following amounts:

Adjusted Checkbook Balance	=	$ *3922.06*
Total Outstanding Checks	=	$ *1435.79*
Adjusted Bank Balance	=	$ *3922.06*

PROBLEM #2

Checkbook Balance	=	127.19
Service Charge	=	1.10
Bank Balance	=	178.15
Outstanding Deposit	=	-0-
Outstanding Check	=	30.00
Outstanding Check	=	22.06

Fill in the following amounts:

Adjusted Checkbook Balance	=	$ 126.09
Total Outstanding Checks	=	$ 52.06
Adjusted Bank Balance	=	$ 126.09

PROBLEM #3

Checkbook Balance	=	857.34
Service Charge	=	-0-
Bank Balance	=	679.84
Outstanding Deposit	=	315.65
Outstanding Check	=	5.19
Outstanding Check	=	25.00
Outstanding Check	=	57.86
Outstanding Check	=	50.10

Fill in the following amounts:

Adjusted Checkbook Balance	=	$ 857.34
Total Outstanding Checks	=	$ 138.15
Adjusted Bank Balance	=	$ 857.34

PROBLEM #4

Checkbook Balance	=	1587.34
Service Charge	=	10.00
Bank Balance	=	1599.58
Outstanding Deposit	=	200.00
Outstanding Check	=	57.86
Outstanding Check	=	93.74
Outstanding Check	=	36.43
Outstanding Check	=	81.10

Fill in the following amounts:

Adjusted Checkbook Balance = $ 1577.34
Total Outstanding Checks = $ 269.13
Adjusted Bank Balance = $ 1530.45

Notice that this account does not reconcile with the bank statement. Answer the following questions:

a. What is the difference in the two adjusted amounts? $ 46.89

b. Circle the statement that is true:
   The checkbook shows a larger balance than the bank.
   The checkbook shows a smaller balance than the bank.

PROBLEM #5

Checkbook Balance	=	56.85
Service Charge	=	-0-
Bank Balance	=	47.78
Outstanding Deposit	=	25.00
Outstanding Check	=	7.00
Outstanding Check	=	7.93

Fill in the following amounts:

Adjusted Checkbook Balance = $ 56.85
Total Outstanding Checks = $ 14.93
Adjusted Bank Balance = $ 57.85

Notice that this account does not reconcile with the bank statement. Answer the following questions:

a. What is the difference in the two adjusted amounts? $ 1.00

b. Circle the statement that is true:
   The checkbook shows a larger balance than the bank.
   The checkbook shows a smaller balance than the bank.

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```
RECONCILIATION OF BANK STATEMENT


    DESCR.  AMOUNT  DESCRIP.     AMT.
-------------------------------------

CHKBK BAL           BANK BAL


SER.CHG.            OUT. DEP
                              ---------
                           ➔ D10
                                 0.00


                    OUT. CKS




                              ---------
                           ➔ D18
                    TOT. CKS     0.00
-------------------------------------
               ➔ B20         ➔ D20
ADJ.CHKBK        0.00 ADJ.BANK    0.00
```

CELL FORMULAS

B20:/F$@SUM(B6–B8)

D10:/F$@SUM(D6...D8)

D18:/F$@SUM(D12...D16)

D20:/F$+(D10–D18)

BIG SPEND
EXPENSE REPORT

Develop an Expense Report spreadsheet for Barney Bigspend. Barney's expense report should have one column for each day of the week, Sunday through Saturday, and an Items Totals column. There should be rows for the following items:

— Room charges
— Meals
— Air Fare
— Car rental
— Parking
— Entertainment
— Transportation
— Miscellaneous
— Daily Total

The sum of the Totals column and the sum of the Daily Totals row must be equal.

Now set up your Expense Report spreadsheet using the following data formatted to dollars:

Sunday	-	Air fare to Kansas City	$180
		Cab to hotel	13
		Meals	18
		Transportation to airport	12.50
Monday	-	Meals	25
Tuesday	-	Meals	30
		Entertainment	20
		Transportation	15
Wednesday	-	Meals	25
		Laundry (Misc.)	8
Thursday	-	Meals	35
		Entertainment	45
		Transportation	20
Friday	-	Meals	8
		Air fare return to Cincinnati	180
		Van to airport	10
		Transportation from airport	12.50

Include these expenses:

— room charge $55/day, Sunday through Thursday nights
— total tips for the week $18 (show them all on Friday and include under Miscellaneous)

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	Given Data	Hotel = $87.50/day	No Entertainment Allowed	Air Fare = $225 one way
Sunday's Total	$ 278.50	$ 311.00	$ 311.00	$ 356.00
Wednesday's Total	88.00	120.50	120.50	345.00
Friday's Total	228.50	316.00	316.00	361.00
Saturday's Total	∅	87.50	87.50	312.50
Daily + Item Sunday				

EXPENSE

	SUN	MON	TUES	WED	THURS	FRI	SAT	ITEM TOT
ROOM CHARGES								→ J5 0.00
MEALS								→ J7 0.00
AIR FARE								→ J9 0.00
CAR RENTAL								→ J11 0.00
PARKING								→ J13 0.00
ENTERTAINMENT								→ J15 0.00
TRANSPORTATION								→ J17 0.00
MISCELLANEOUS								→ J19 0.00
DAILY TOTAL	→ C21 0.00	→ D21 0.00	→ E21 0.00	→ F21 0.00	→ G21 0.00	→ H21 0.00	→ I21 0.00	
						DAILY SUM		→ J22 0.00
						ITEM SUM		→ J23 0.00

CELL FORMULAS

C21:@SUM(C5...C19)

D21:@SUM(D5...D19)

E21:@SUM(E5...E19)

F21:@SUM(F5...F19)

G21:@SUM(G5...G19)

H21:@SUM(H5...H19)

I21:@SUM(I5...I19)

J5:@SUM(C5...I5)

J7:@SUM(C7...I7)

J9:@SUM(C9...I9)

J11:@SUM(C11...I11)

J13:@SUM(C13...I13)

J15:@SUM(C15...I15)

J17:@SUM(C17...I17)

J19:@SUM(C19...I19)

J22:@SUM(C21...I21)

J23:@SUM(J5...J19)

E-Z PAYROLL

Set up a spreadsheet for the E-Z Payroll Company using the following payroll information.

Employees are paid according to a salary plus commission plan. Each employee receives $500 per week salary. They also receive a 15% commission on all total sales above $1,000.

Set up columns for Employee Name, Total Sales, Salary, Commission, and Total Pay. Use global formatting for dollars and cents. It will be easier to complete this problem if you fix the employee names and column headings in place and put an underline above the column totals. You are given the following employee data: Names and total sales.

Names	Total Sales
Adams, Tom	1200
Bryant, Ellen	1800
Gordon, Jean	2400
Kelly, Stan	2200
Wallace, Jackie	3800

Develop and replicate a formula for the commission and total pay columns for each employee. In the lower right corner use a formula to calculate for all employees:

    total sales
    total salary
    total commission
    total pay

Store this problem on your Student Data Disk using the name E-Z PAYROLL COMPANY with the original given data.

On the lines provided below, record the data from your screen. Then fill in the remaining columns by editing your data and formulas.

	Given Data	Salary 1000/wk.	Commission 20% of sales 1000	Commission 25% of sales 1000
Total Sales	$ 11400.00	11400.00	11400.00	11400.00
Total Salary	2500.00	5000.00	5000.00	5000.00
Total Commission	960.00	960.00	1280.00	1600.00
Total Pay	3460.00	5960.00	6280.00	6600.00

```
                    E-Z PAYROLL COMPANY


        EMPLOYEE         TOTAL              COM-      TOTAL
          NAME           SALES    SALARY   MISSION     PAY

                                           → E6       → F6
   ADAMS    TOM         1200.00   500.00    30.00      530.00


                                           → E8       → F8
   BRYANT   ELLEN       1800.00   500.00   120.00      620.00


                                           → E10      → F10
   GORDON   JEAN        2400.00   500.00   210.00      710.00


                                           → E12      → F12
   KELLY    STAN        2200.00   500.00   180.00      680.00


                                           → E14      → F14
   WALLACE  JACKIE      3800.00   500.00   420.00      920.00

                        → C16               → E16     → F16
            TOTALS     11400.00             960.00    3460.00
```

CELL FORMULAS

C16:@SUM(C6...C14)	F6:+D6+E6
E6:+(C6-1000)*.15	F8:+D8+E8
E8:+(C8-1000)*.15	F10:+D10+E10
E10:+(C10-1000)*.15	F12:+D12+E12
E12:+(C12-1000)*.15	F14:+D14+E14
E14:+(C14-1000)*.15	F16:@SUM(F6...F14)
E16:@SUM(E6...E14)	

APPENDICES

THE ELECTRONIC SPREADSHEET

TEACHER'S MANUAL

CREDITS

The Electronic Spreadsheet was authored by Ron Erickson, Claudia Gilbertson, Karen Jostad, and Duane Loewen. Project Coordinator was Karen Jostad. Don Rawitsch also contributed material which was incorporated in this package. Mr. Erickson and Ms. Gilberson are business education instructors for the Mounds View School District in Minnesota. Ms. Jostad, Mr. Loewen, and Mr. Rawitsch are staff members of the Minnestoa Educational Computing Consortium.

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Chet Garness	-	Chisago Lakes Area Schools
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Classroom testing was completed by:

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TO THE READER:

MECC SERVICES

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